

**Meeting of the Federal Open Market Committee on
December 14, 2010**

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, December 14, 2010, at 8:30 a.m. Those present were the following:

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

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

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

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

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

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

Brian Sack, Manager, System Open Market Account

Patrick M. Parkinson, Director, Division of Banking Supervision and Regulation, Board of Governors

Nellie Liang, Director, Office of Financial Stability Policy and Research, Board of Governors

William Nelson, Deputy Director, Division of Monetary Affairs, Board of Governors

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

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

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

Andrew T. Levin, Senior Adviser, Office of Board Members, Board of Governors

Michael G. Palumbo and Joyce K. Zickler, Deputy Associate Directors, Division of Research and Statistics, Board of Governors; Gretchen C. Weinbach, Deputy Associate Director, Division of Monetary Affairs, Board of Governors

Fabio M. Natalucci, Assistant Director, Division of Monetary Affairs, Board of Governors

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

Dale Roskom, First Vice President, Federal Reserve Bank of Cleveland

Harvey Rosenblum, Daniel G. Sullivan, and John C. Williams, Executive Vice Presidents, Federal Reserve Banks of Dallas, Chicago, and San Francisco, respectively

David Altig, Richard P. Dzina, Mark E. Schweitzer, and Kei-Mu Yi, Senior Vice Presidents, Federal Reserve Banks of Atlanta, New York, Cleveland, and Minneapolis, respectively

Tobias Adrian, Vice President, Federal Reserve Bank of New York

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

Alexander L. Wolman, Senior Economist, Federal Reserve Bank of Richmond

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CHAIRMAN BERNANKE. Good morning, everybody. We welcome back First Vice President John Moore, who will again represent the Federal Reserve Bank of San Francisco. We'll have a lunchtime briefing by Linda Robertson on legislative updates, and we'll get more information there about our Board nominations.

Let's turn to the first item, a briefing on financial developments and open market operations. Mr. Sack.

MR. SACK.¹ Thank you, Mr. Chairman. I'll be referring to the material entitled "Financial Market Developments and Desk Operations." Financial markets over the intermeeting period have been dominated by two developments: a sizable jump in longer-term interest rates and heightened pressures on sovereign and financial debt in European countries. Today I will discuss these two developments in turn.

As shown in the upper left panel of your first exhibit, Treasury yields have risen sharply since the November FOMC meeting. Virtually all of the increase occurred in the real component of the yield, with break-even inflation rates moving up only slightly. On balance, the 10-year nominal Treasury yield ended the intermeeting period about 75 basis points higher. As shown in the chart to the right, this change in the yield represents the largest intermeeting increase observed in recent years. The key drivers of the increase in yields appeared to be a downward revision to market expectations about the likely amount of Federal Reserve asset purchases, an upward revision to the expected supply of Treasury debt as a result of the possible tax compromise, and a reassessment of the likely path of short-term interest rates amid greater optimism about the economic outlook.

As shown in the middle left panel, the median response from the Desk's primary dealer survey conducted early last week indicated that the Federal Reserve's asset purchase program was expected to reach \$850 billion (the middle column), compared with the expectation of around \$1 trillion that was priced in ahead of the November FOMC meeting (the first column). That downward revision in part resulted from the considerable backlash to the asset purchase program from U.S. politicians and foreign officials. In addition, market participants interpreted communications from individual FOMC members as suggesting less support for the program within the Committee than had been assumed.

Market participants scaled back their expectations even further following the news last week that a tentative agreement had been reached on a proposal for

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

extending and expanding tax cuts. This proposal was seen by many market participants as providing a significant boost to GDP growth in 2011 and hence as reducing the need for additional asset purchases beyond the amount already announced. Indeed, a follow-up survey of the primary dealers that the Desk conducted late last week indicated that the median expectation of asset purchases had fallen to \$600 billion (the last column). In addition, market participants believe that the unanticipated components of the new tax agreement could add between \$100 and \$300 billion to Treasury debt issuance over the next year, further increasing the amount of Treasury debt that needs to be held by private investors. Overall, the increase in supply appears to have boosted the term premium embedded in longer-term yields.

As noted earlier, the increase in longer-term Treasury yields has also been driven by a reassessment of the likely path of short-term interest rates. Market participants generally revised up their forecasts for GDP growth next year in response to the incoming economic data and the tax proposal. Accordingly, as shown in the middle right panel, investors brought forward the expected timing of monetary policy tightening, with the implied policy path from federal funds and Eurodollar futures rates now reaching 50 basis points in the first half of 2012.

With these developments, the interest rate environment has changed substantially. Ahead of the November meeting, many market participants thought that the Federal Reserve's ongoing presence in the market and the sluggish nature of the economic recovery would ensure a stable and low interest rate environment across the yield curve. That view provided comfort to those establishing long positions in the market and likely contributed to the observed decline in the term premium. However, the downward revision in the expected size of asset purchases and the improvement in the economic outlook have shaken that view, causing investors to adjust their positions abruptly at a time when the approaching year-end may have limited market liquidity. These dynamics contributed to choppy trading conditions and sizable movements in longer-term interest rates. The anticipated volatility of longer-term rates going forward, shown in the bottom left panel, moved up sharply, reflecting this shift in the rate environment.

The improvement in the economic outlook and the shift in LSAP expectations also influenced broader financial conditions, as shown in the table in the bottom right panel. Equity prices moved up further over the intermeeting period, presumably because the more favorable economic outlook was sufficient to offset any negative effects arising from higher interest rates. Corporate bond spreads narrowed slightly since the last FOMC meeting, while the broad dollar index appreciated modestly. All of these measures remain more accommodative than they were back in August, as the sizable changes that were realized ahead of the November FOMC meeting were sustained or only partly reversed.

In addition to the movements in U.S. rates, an important focus in financial markets in recent weeks has been the situation in the European periphery, the subject

of the second exhibit. Nathan Sheets will cover many of the European developments in detail, but I will go ahead and describe some of the related developments in financial markets.

As you know, Ireland, the EU, and the IMF agreed to a support package for Ireland intended to provide capital to their financial system and to cover sovereign debt liabilities for the next two to three years. However, market attention quickly turned to conditions in other countries, including Portugal, Spain, and Italy. The particular situations facing these countries differ importantly, but in each case the markets are asking the same question—whether the combination of sovereign debt and financial sector liabilities for that country is on a sustainable track. In addition, market participants have increasingly noted that the backstop mechanisms put in place to date, including the European Financial Stability Facility, may prove insufficient to address pressures in some of these countries, given the volume of their debt outstanding.

In response, sovereign debt spreads in these countries relative to German yields moved up sharply, as shown in the upper left panel, and the CDS spreads of the largest financial firms in those countries widened, as shown to the right. Sovereign spreads have retraced some of their widening of late, helped in part by a faster pace of sovereign debt purchases by the ECB in particular markets. However, debt spreads across these countries remain elevated, and the market seems quite vulnerable to further negative surprises.

The concerns about the debt situation in these countries led to some pressure on euro-denominated assets more broadly. European equity prices have underperformed U.S. share prices in recent months, as shown in the middle left panel, and the euro depreciated sharply against the dollar, as shown to the right. In addition, option prices suggest that market participants are now placing higher odds on the possibility of sizable euro depreciation over the next year.

An area of particular concern is the funding situation for banking firms in the European periphery. Some of those firms already rely heavily on the ECB for euro-denominated funding. In addition, signs are emerging that dollar-denominated funding for those firms is becoming strained.

Indeed, U.S. money market funds are increasingly pulling back from providing dollar funding to major financial firms in peripheral countries, similar to the pattern that had taken place in the spring. According to a confidential survey conducted by ICI, reported in the bottom left panel, money market funds' holdings of Spanish bank liabilities have declined sharply over the past month, and the holdings of Italian assets are also now falling notably. These data are consistent with anecdotal reports about money market funds not rolling over their exposures in these countries.

Dollar funding pressures have not spread to financial firms more broadly, as indicated by the stability of the spot LIBOR spread to OIS, shown in the bottom right

panel. However, European institutions that rely on currency swaps to raise dollar funding have faced higher borrowing rates, as shown by the swap-implied rate for the EURIBOR panel. Moreover, some market participants have argued that funding pressures could have already spread more broadly if it were not for the presence of the central bank liquidity swap lines that the Federal Reserve has in place with the ECB and four other central banks. They argue that the presence of these lines serves as an important backstop that has helped maintain the flow of dollar funding from private sources.

Before leaving this exhibit, let me discuss the proposal on the liquidity swap lines that Nathan Sheets and I described in a memo that was circulated to the Committee ahead of the meeting. The liquidity swap lines that are currently in place with the European Central Bank, the Bank of Japan, the Bank of England, the Swiss National Bank, and the Bank of Canada are scheduled to expire at the end of January. Given the unsettled conditions in funding markets and the uncertainty about how stresses in European financial markets could unfold, our central bank counterparties have expressed interest in extending the liquidity swap lines.

As indicated in our memo, Federal Reserve staff recommends that the Committee approve an extension of these swap lines for six months, which would bring their expiration date to August 1, 2011. All aspects of the swap arrangements other than the expiration date would remain unchanged, including the expected pricing of any dollar funding operations at 100 basis points above the OIS rate. This pricing should ensure that funding from the lines is attractive to financial institutions only during times of severe market stress. We will be asking for a vote on this decision after the conclusion of my remarks. If the Committee were to vote affirmatively, the five foreign central banks would take corresponding actions over the next several days, and the extension could be publicly announced soon thereafter.

Your final exhibit focuses on the asset purchases for the SOMA portfolio. As of last Friday, the Desk had conducted \$75 billion of purchases out of the \$600 billion expansion of the portfolio that was announced in November and an additional \$31 billion of purchases associated with the reinvestment of principal payments on agency debt and mortgage-backed securities over the same period. The Desk's purchases have followed the maturity distribution shown in the upper left panel, resulting in an average duration of 5.5 years for the securities obtained, as planned.

The operations have gone very well. Participation by dealers has been strong, with an average offer-to-cover ratio of nearly 4, and the distribution of securities accepted has been fairly wide. As expected, we have purchased a decent amount of securities that have been recently issued but that are not on-the-run issues. In addition, we have purchased some older securities for which the 35 percent limit on SOMA holdings would have otherwise been binding. At this point, 24 issues have moved through that threshold, and our holdings of some of those issues are now approaching 50 percent. The Desk intends to place additional limits on the extent to

which SOMA holdings of any individual security can increase above the 50 percent threshold.

The robust pace of purchases does not appear to be causing significant strains on the liquidity or functioning of the Treasury market. As shown to the right, trading volume has been in its normal range. And while some other measures of liquidity, such as the depth of market quotes, have deteriorated a bit, our judgment is that this pattern has more to do with the approaching year-end than with our purchases. Importantly, we do not see any signs of the market facing unusual scarcity of any particular issues, including those for which our holdings have moved through the 35 percent threshold. Indeed, the number of securities trading on special in the repo market has remained low, as shown in the middle left panel, and there has been no unusual activity from our securities lending facility.

The next two panels focus on the pace of our purchases going forward. As shown in the middle right panel, because the purchases did not begin until the week after the FOMC meeting, the purchases in November fell short of the \$75 billion per month pace that would be required to reach the intended \$600 billion expansion in holdings by the end of the second quarter. Thus, the Desk will have to make up a small amount of ground at some point during the program. For now, we have maintained the pace of \$75 billion per month, but we intend to increase the monthly pace of purchases to about \$80 billion at some point early next year, as in the potential path shown in the chart.

The bottom left panel shows our projections for the pace of purchases associated with the reinvestment of principal payments on our agency debt and MBS holdings. Because of the recent backup in longer-term rates, we lowered our estimates of MBS prepayments significantly. We now project that the reinvestment purchases through the second quarter of 2011 will run at an average pace of about \$27 billion per month.

The final panel covers the effects of the repurchase program on the pricing of long-term Treasury bonds. The maturity distribution of the Federal Reserve's asset purchases that was announced by the Desk at the time of the FOMC statement involved a smaller allocation to bonds than expected by some market participants. As a result, the bond sold off, even as the middle of the Treasury yield curve rallied, steepening the slope between the 10- and 30-year Treasury yields shown in the chart. The increase in the slope was abrupt, as some market players reportedly had established positions betting on a larger allocation to the bond and unwound them quickly following the announcement. Over recent weeks, however, the slope has retraced that initial reaction and has returned to levels lower than those observed before the FOMC meeting.

Lastly, I would like to make one brief note about the MBS holdings in the SOMA portfolio. Several weeks ago, I circulated a memo to the Committee with a recommendation for conducting CUSIP aggregation for our MBS holdings. The Desk plans to move forward with the plan described, only on a slightly later time line

than presented in the memo. Our current intention is to announce this plan in early January and to begin aggregating our holdings in the middle of that month. Thank you. That concludes my prepared remarks.

CHAIRMAN BERNANKE. Thank you. Let me suggest that we divide the question period into two parts. Let's first take any questions on financial conditions, and then, if the Committee is agreeable, we can vote on ratifying domestic open market operations; after that, we can take any questions for either Brian or Nathan on the swap agreement proposal, and then take a vote on that. Okay? The floor is open for questions on financial conditions. President Fisher.

MR. FISHER. Brian, margin debt continues to rise to an extraordinarily high level. I'm curious as to how you interpret that, from the standpoint of the Desk. Are we getting a signal that we have excess, or is it just bringing it up to modern times?

MR. SACK. Regarding margin debt, or leverage in the financial system more broadly, it has been moving up. We continue to see the levels of that leverage as not excessive and as not making us unusually vulnerable to a sharp correction, but we also continue to watch those measures.

MR. FISHER. The focus has been on the absolute number, but the absolute number—whatever it is, 300 or so—relative to where we are in terms of the depth and breadth of the financial market is not yet worrisome, is that correct?

MR. SACK. Yes, that's our judgment at this point.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. Brian, in chart 3, how tight is the distribution of opinion among survey participants? Is this a median of a broad spread of opinion as to what we'll do or what the program will be, or has it tightened up?

MR. SACK. The distribution has tightened. Back in November we saw a considerable range of views about the size of asset purchases, with some participants expecting very large numbers, like \$1.5 trillion, maybe \$2 trillion. At this point, the median expectation is, as I said, \$600 billion, and there were no respondents with a reading below that. So we've seen the distribution tighten up around that announced size of the program.

MR. LOCKHART. Thank you.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Brian, you wrote us a memo on December 10 about SOMA's holdings of foreign exchange assets and euro-denominated assets, and among their holdings are these reverse repo investments. You talked about the six countries whose sovereign debt we accept as collateral for those, which include Italy and Spain. In a chart you showed that the fraction of collateral we get that's Italian and Spanish sovereign debt has increased recently and explained that the margin we take is 2 percent across the board, which is comparable with what the ECB does—there's a table in the back that shows ECB and Bank of England haircut rates.

But there's also a table that shows the London Clearing House collateral rates, and they're all below 2 percent—well, half of them are below 2—but Italian and Spanish haircuts are above 2 percent, at 2.8 and 3.1 percent. Do you think that's why we're getting more Italian and Spanish sovereign debt? And do you think it's prudent for our haircuts to be below the market haircut?

MR. SACK. I do think that is why. As you know, the regime we have in place doesn't differentiate across collateral types, by the haircut or by the rates that we accept in the

operations, so there is a tendency for counterparties to give us what may be seen as riskier collateral during times of heightened market stress.

This regime was set up at a time when there was not the differentiation that we see today across different types of European debt. In looking forward, we have started a comprehensive review of the entire framework, including the haircut schedule that we have in place, and we will consider whether to make changes, such as graduated haircut schedules by collateral type. Having said that, our quick reading at this point is that, even with the elevated volatility that we see in European sovereign debt, the 2 percent haircut appears adequate. Recall that this is a haircut applied to collateral that is marked to market and updated every day, so the haircut is only intended to cover a daily change in the value of the collateral, and it only is relevant in the event of a counterparty default. Again, though, as you can see, other foreign official institutions and the London Clearing House do have differentiated haircuts by collateral type and also, in some cases, by collateral maturity, and those are some things we want to look at.

VICE CHAIRMAN DUDLEY. Our exposures are very short term, though, right?

MR. SACK. Right. That's what I've noted in the memo. We're authorized to do repos with tenors up to 36 days, but we tend to do mostly overnight, and I think the average tenor of a repo is three days at this point.

MR. LACKER. So for the term repos, it's marked to market daily, and the haircuts are applied daily?

MR. SACK. Yes.

MR. LACKER. Okay. I can appreciate that a daily change is small and that Spain and Italy aren't Ireland and Greece, which we don't accept. But if private sector counterparties think

that a higher haircut is warranted, would it do tremendous violence to front run your big framework review with some adjustments to collateral requirements in the meantime?

MR. SACK. I believe we can do this assessment fairly quickly—that is, I don't mean to imply that there's this huge framework review that's going to take years to complete. We're actively looking at this, and, as we go down that path, if it becomes apparent that it would be desirable to have some kind of graduated schedule, then we can go ahead and move in that direction. It may be advantageous—we just want to do some more analysis before we move.

MR. LACKER. Is there any cost to graduated haircut schedules? Is there any disadvantage to doing that?

VICE CHAIRMAN DUDLEY. Well, there is a cost whenever official institutions start to pull back, because they can send adverse signals. So I think you want to make sure that you do that after full consideration.

MR. LACKER. We have market practice to point to.

MR. SACK. If there's a strong sentiment that the haircut is going to be changed, there's no impediment—we can change the haircuts. But without some kind of analysis or framework, it's hard to know whether we should change them and, if we should, change them to what. We need to determine what an appropriate haircut is. So we need to do a bit of legwork, but I fully appreciate the sense from your question that there's some urgency to the issue.

CHAIRMAN BERNANKE. Okay. Other questions on the financial situation?

MR. FISHER. Can I ask one more?

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. On Dennis's point on chart 3: For what it's worth, I don't consider this a bad thing. You remember, Brian, you and I went through the dealer survey that was conducted

in November because I had some questions about whether it provided the right balance, and I can see where people would conclude a larger number of differences to that survey. But the fact is that we've reached a decision, with all the debate that took place and all of the post-meeting commentary, and I'm not surprised that there's a narrowing of the distribution. We're back to \$600 billion, which is what the decision was. My question—and we can talk about this off line—is: Were any changes made to the way the dealer survey is conducted to reflect a balanced view or to throw them off guard in terms of expectation?

MR. SACK. We certainly didn't make changes to throw them off guard. We always try to be careful—

MR. FISHER. To keep them guessing.

MR. SACK. We always try to be careful with the dealer survey and to keep the questions tracked to policy issues that have been discussed in the public domain. I don't think the November survey was misleading or overly suggestive to them. It did get a lot of attention, but I think that it reflected the environment in the press and in financial markets around the time of that meeting. And this time the survey didn't really get any additional attention.

As to the point of whether \$600 billion is a bad thing, we do think some of the backup in rates has been associated with this revision to the expected size of the asset purchase program. Certainly before the November meeting, the effects we saw were quite large—a 50 basis point decline in longer-term real interest rates. That would be very large relative to a \$600 billion asset purchase program based on the way we've calibrated the likely effects. I think that the initial market reaction was larger because of the expectation of a much bigger purchase program and the open-ended perception of it. If that expectation has been scaled down to a \$600 billion

program, it's not surprising that we've seen some backup in rates. A policy issue for the Committee is whether that's the right effect on rates, and whether that was the intention or not.

MR. FISHER. My point, Mr. Chairman, is that we've achieved greater definition, and I don't consider that to be a bad thing. We could dispute the cause of the backup in rates—obviously there are many different variables here. But I just wanted to point out that, since people might refer to this chart in their discussions of policy, this is not necessarily a bad thing from my point of view.

CHAIRMAN BERNANKE. No, of course it's not. Brian was just making a positive statement about his analysis of why the rates changed. It could be a bad thing; it could be a good thing.

MR. FISHER. Right.

CHAIRMAN BERNANKE. President Bullard.

MR. BULLARD. Brian, I'm actually more concerned about chart 4, which has the implied federal funds rate path. I didn't think we were doing anything that stepped away from the "extended period" language, and I would have expected the message to be that we're just as committed to "extended period" as we ever were, and in addition, we're doing quantitative easing, and in some ways we're strengthening our commitment to stay low for longer. What do you think is going on in chart 4?

MR. SACK. It does appear that financial market participants revised their economic forecast; they did so even in advance of the tax agreement. We could actually see in our primary dealer survey that the incoming economic data had led to more optimism about near-term growth prospects. And then the proposed tax agreement was seen as having a fairly significant effect on

GDP growth in 2011. I think the revision largely came from greater optimism about the economy rather than from any messaging about the policy path from the FOMC.

MR. BULLARD. Do you think the private sector is more optimistic than we are about prospects for the economy, and that's why this curve shifted up?

MR. SACK. Either that or they sense a slightly different reaction function, one that would be more responsive to economic growth prospects.

Can I make a couple more comments about the chart, though? First, we do think the term premiums moved up pretty substantially. Of course, term premiums are a larger component for longer-term yields, and they tend to get smaller as we move in on the yield curve. But it's possible that some of this revision, especially out in 2012, reflects term premiums, because this chart is constructed with an assumption of a constant term premium.

Second, the upward shift also reflects greater risk. As you've seen in the Tealbook charts, the modal forecast is much lower than the futures path. The futures path corresponds to the mean forecast, and, essentially at the zero bound, you just have one-sided risks. So when the markets have less conviction, you tend to see the futures rate path jump up. One of the things that was striking ahead of the November meeting was the extent to which the implied volatility measures of the short-term interest rates had collapsed. The market had gotten to a point where participants were not just seeing policy on hold into the 2012, but they were also feeling incredibly confident about that. And I think what you see here is just less confidence about that, even if the modal forecast still has the tightening later in 2011 or into 2012.

CHAIRMAN BERNANKE. Other questions? [No response] Okay, may I have a motion to ratify the domestic open market operations?

MS. YELLEN. So moved.

CHAIRMAN BERNANKE. Okay. Without objection. Let's turn now to the proposed extension of the swap agreements. Just for your information, I have received calls directly from the heads of several of the relevant central banks asking us to do this, so there is certainly interest on the part of our counterparties. But let me open the floor for any questions either to Brian or to Nathan Sheets on the proposal. Are there any questions? President Rosengren.

MR. ROSENGREN. I have a question just about the length of the extension. Given that the sovereign debt crisis is unlikely to be completely resolved in six months, is there a reason not to have it go out for a longer period of time?

MR. SHEETS. Our feeling was that six months is a good chunk of time. It gives the Committee ample governance of it so that six months from now we can sit down again and reassess. But I very much share your view that it's unlikely that this crisis will be completely behind us after six months, but it might make sense at that point to want to reassess and reevaluate whether you want to extend the swap lines.

MR. TARULLO. What would change in six months? I understand that the world would change, but are you anticipating, Nathan, that things would be worse in Europe and, therefore, we would not want to extend the swap arrangement?

MR. SHEETS. My guess is that six months out there will still be a lot of uncertainties, and a lot of the arguments that we're putting forward today about the swap lines providing a backstop will probably still be legitimate. But the sense of the staff was that it made sense to give the Committee another "bite at the apple," so to speak, six months out and make sure that you still wanted to extend it. Certainly, the staff is not opposed to a longer extension if that's the preference of the Committee. We'd be comfortable extending 9 months or even 12 months out.

CHAIRMAN BERNANKE. Governor Raskin.

MS. RASKIN. Nathan, what do you anticipate would be the effects of an announcement at this point of the extension?

MR. SHEETS. Our intention is to keep the whole process of the extension as low-key as possible, and our hope is that the announcement will be taken in stride by the markets as something reassuring and as a reminder that this backstop is in place. During periods of intensified market stress, we've come out with announcements coordinated with other relevant central banks using joint language, such as, "we, the central banks, announce today," etc., etc., in an effort to shift market conditions and increase confidence. In this instance, at least from my perspective, conditions in dollar funding markets are less roiled than I would have expected, given the stresses that we're seeing in the sovereign debt markets. So we're going to try to remind the markets that these swap lines will still be there, and we're going to keep the announcement as low-key as possible; our hope is that this would be very reassuring and very soothing to the markets and to market confidence.

MS. RASKIN. So, from that perspective, you'd like the announcement to occur with a sufficient amount of time before the deadline.

MR. SHEETS. Exactly. That's why we're bringing it to the Committee today rather than at the January meeting. We were concerned that, if we waited until the January meeting, then, as the deadline grew closer, the markets would start to worry about whether the swap line was going to be there or not. We wanted this to get resolved well in advance of any such concerns.

CHAIRMAN BERNANKE. I have a two-hander from President Lockhart.

MR. LOCKHART. What would be the interpretation of extending longer than six months? Is there a risk that that would be interpreted as more alarmist in some way?

MR. SHEETS. It could go either way. On the one hand, you could say, well, it would give the markets confidence that these swap lines are going to be there for an extended period of time to provide support. On the other hand, the markets could interpret it as a sign that the central banks are very worried about dollar funding conditions. So I think that's more a policy judgment.

CHAIRMAN BERNANKE. I have no objection personally to making it nine months if that's the Committee's preference. We can have a short discussion of that—I don't want to take too much time on this, but we could do that. President Bullard.

MR. BULLARD. Is there some regular cycle on which we normally review this? I know at one time it was annually.

MR. SHEETS. We've done extensions of varying lengths. Six months wouldn't be unusual. So the markets wouldn't respond to that and say, "Oh, they're doing something they've never done before." If we go nine months, that wouldn't seem unusual either. If we did a full year, it would be the longest we ever extended or put them in place.

MR. BULLARD. So if we do six months, it's kind of in a cycle.

MR. SHEETS. Six months is a typical approach.

MR. BULLARD. Like normal business.

MR. SHEETS. Yes.

MR. BULLARD. Okay.

CHAIRMAN BERNANKE. A two-hander from the Vice Chairman.

VICE CHAIRMAN DUDLEY. Does the ECB have a preference in terms of the length of extension?

MR. SHEETS. I'm not sure.

MR. SACK. Our discussions with them focused on the six-month horizon, and they seemed quite comfortable with that. That doesn't mean they would object to a longer horizon, but we didn't pursue that deeply.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. I imagine this will get some—forgive me for mentioning this—political attention. We just need to explain it in plain English, because my guess is this will be one of the actions that comes out of this meeting that is different from what we have done before. It might get more attention. I would rather just pay the price for a nine-month or a longer-term extension, because we are likely to renew it. Of course, it is obvious we should explain this in the simplest terms to that audience regarding the low nature of the risk that is involved. So if we are going to get some criticism from some of the people that like to criticize us, I would rather just lock it in now than do it in bits and pieces. That would be my opinion.

CHAIRMAN BERNANKE. Do you see any problem with our counterparties if we do nine months today? Nathan.

MR. SHEETS. I wouldn't.

MR. SACK. I wouldn't think so.

CHAIRMAN BERNANKE. Is there any objection to a nine-month arrangement?

President Lacker.

MR. LACKER. I would just speak in favor of the arrangement the staff brought us. It is a renewable thing. I doubt the staff has ever given our counterparties reason to believe that renewal was questionable or problematic. It never has been, but it does give us the opportunity to reevaluate the terms, reevaluate amounts, and retain that flexibility. So I, for one, would be more comfortable with the six-month arrangement.

CHAIRMAN BERNANKE. Are there others?

MR. PLOSSER. For the same reasons I like what the staff proposed. I thought that was perfectly reasonable, and I kind of like the six-month cycle. That's fine with me, too.

CHAIRMAN BERNANKE. All right. Other comments? [No response] Okay. Well, we could do parliamentary procedure here, but I think there is a sense, at least around the table, that we are open to renewal if conditions continue to be stressed in European markets. Okay, any further comments or questions? [No response] Perhaps we could have a vote. Can I have a motion?

MS. YELLEN. So moved.

CHAIRMAN BERNANKE. All in favor? [Chorus of ayes] Any objections? [No response]

MS. DANKER. Just to be clear, that vote is on the resolution that was in the memo.

CHAIRMAN BERNANKE. Correct, the resolution that was in the memorandum. Would anyone like to hear it read? [No response]

Okay, thank you. Let's go on, then, to item 2, the economic situation. Dave.

MR. STOCKTON. Thank you, Mr. Chairman. Under the assumption that my remarks for this morning have not already been posted to WikiLeaks [laughter], I thought I'd provide the Committee with a brief summary of what I believe are the four major takeaways from the December Tealbook. First, the incoming information on economic activity has almost uniformly been stronger than we had expected at the time of the October projection. This was true for readings on the labor market, on production, and on spending. Second, there was one important exception to this pattern of more favorable data, and that has been the readings on housing activity and home prices. In response to an accumulation of downside surprises since midyear, we have marked down considerably our forecast for home sales, construction, and house prices for the next two years. Third, while we have had some noticeable shifts in the other factors conditioning our forecast, the net effect has been only a small positive for the level of activity by the end of 2012. Fiscal policy and the stock market are expected to provide greater stimulus to aggregate demand over the next two years, but the effects of these more favorable influences are partially cushioned by higher long-term interest rates, a slightly stronger dollar next year, and a little

higher path for oil prices. And fourth, core inflation has run noticeably below our expectations for the second half of the year. Although some of that surprise looks to us to be transitory, we have taken a little signal from those lower readings on price inflation. So let me address, in turn, each of these four takeaways.

I will start with the incoming data, and specifically the employment situation. A surprisingly upbeat October labor market report was followed by a disappointing showing in November. But taken together, these two reports paint a picture of a slightly stronger labor market than was anticipated in our previous forecast. The level of private payroll employment in November exceeded our October projection by about 130,000, with hours worked and labor income also stronger than we had expected. Moreover, other labor market indicators support our projection of further gradual improvement in the employment situation in coming months. Initial claims for unemployment insurance have resumed their modest downtrend, job openings are up, help-wanted advertising is improving, and hiring intentions have moved higher.

Like the labor market data, the recent readings on industrial production have also outstripped our October projection. Manufacturing IP looks to have posted solid gains over the last two months. Whereas we had been expecting factory output to post a small decline in the fourth quarter at the time of the last meeting, we are currently projecting an increase at an annual rate of nearly 4 percent. Moreover, both the national ISM index and most of the regional indexes point to moderate gains in industrial production in coming months. To be sure, IP has slowed substantially from its pace in the first half of the year when inventory restocking was providing a lift to output. But overall, this sector has shown more resilience than we had expected, boosted by strengthening domestic demand and exports.

The data on spending by both households and businesses also have been firmer of late than we had anticipated. Consumer spending has been coming in stronger than we thought, and this morning's reading on retail sales for November continued that pattern. There were upward revisions to spending in the retail control category for September and October, and November increased by considerably more than we were projecting. All told, we now estimate that real PCE increased at an annual rate of 3¼ percent in the second half—that's ¾ percentage point more than in the October forecast and 1¼ percentage points faster than in the first half of the year. Encouragingly, because of upward revisions to estimates of household income, these larger increases in spending have occurred alongside an upwardly revised personal saving rate. In the business sector, we now expect real outlays on equipment and software to grow at an annual rate of about 10 percent in the second half of this year, nearly 3 percentage points stronger than we had projected six weeks ago. That is still a slowdown from the pace seen earlier this year, but a less pronounced slowdown than we were expecting.

Since we closed the Tealbook last Wednesday, in addition to this morning's upward surprise in the retail sales data, we also received stronger wholesale inventory data for the third quarter and much stronger readings on merchandise trade data for

October. This was only offset a bit by a somewhat weaker figure on retail inventories. Taken together, these data would put our forecast for the growth of real GDP in the second half of the year closer to $3\frac{1}{4}$ percent than to the $2\frac{1}{2}$ percent pace that we had in the December Tealbook and the 2 percent rate incorporated in our October projection.

As I noted earlier, there has been one major exception to the pattern of generally more favorable data on economic activity—and that has been the housing sector. Home sales and construction have continued to come in below our expectations. And more recently, house prices have fallen more quickly than we were anticipating. The data that we have received since our last forecast, taken alone, would not have justified as large a revision to our housing forecast as we made this round. But we have been persistently surprised to the downside since the middle of the year. Given the difficulties of trying to discern the underlying trends in housing supply and demand in the aftermath of the tax incentives and more recently the uncertainty introduced by the mortgage foreclosure problems, we had been reluctant to make a major change in our forecast. But over this intermeeting period, we felt that we had accumulated enough evidence against our previous view that a more serious adjustment was called for. We lowered both the level and the trajectory for home sales and construction over the next two years, so that the level of total housing starts is nearly 300,000 units below our previous forecast at the end of 2012.

Of course, we can't be certain why housing has fallen so far short of our expectations, but at least part of the story would appear to be that the overhang of vacant homes has put a bigger damper on new construction than we had expected. In addition, that supply overhang appears to be weighing more heavily on house prices, perhaps renewing concerns on the part of some potential buyers about buying into a falling market.

The revision that we have made to house prices is sizable. The CoreLogic house-price index fell at an annual rate of 15 percent in the third quarter and appears on track to decline at more than a 10 percent rate in the current quarter; we had been expecting these declines to average about 5 percent. We took on board these weaker near-term figures and further assumed that prices will continue to fall, albeit at a much slower pace, through next year. By the end of 2012, house prices are about 8 percent lower than in our previous forecast. That hit to household wealth, in turn, restrains consumer spending, all else equal.

Of course, all else was not equal in this forecast. The fiscal, financial, and external influences that condition our forecast also were shifting over the intermeeting period. These effects netted out to a small positive for the forecast. On the fiscal front, we incorporated the key policy elements of the agreement between the President and the congressional Republicans. Much of what is in that agreement was already a part of our baseline forecast, most notably the extension of the 2001–2003 tax cuts and the continuation of emergency unemployment benefits through the end of next year. The major innovations for our forecast were the incorporation of

the payroll tax holiday worth about \$110 billion and the full expensing of most equipment, worth about \$90 billion. Based on our recent experience with similar accelerated depreciation provisions, we suspect that full expensing will have only a small effect on the timing of equipment spending and probably an even smaller effect on the timing of capital equipment production—we've assumed that this provision boosts the growth of real GDP by a tenth in 2011 and lowers growth by a similar amount in 2012.

The one-year payroll tax holiday also acts to raise growth of real GDP next year and lower growth the following year, when payroll tax rates return to their previous levels. But given the lags in spending and the accompanying multiplier effects, we expect the level of output to be higher than it otherwise would have been at the end of 2012. Putting too fine a point on it, we have the payroll tax holiday raising the growth of real GDP by about 0.3 percentage point in 2011 and lowering GDP growth by a little more than 0.1 percentage point in 2012.

Brian has already discussed in considerable detail the backup in long-term interest rates that has occurred over the intermeeting period. As you may recall, we had assumed that there would be some gradual upward pressure on long rates and the exchange value of the dollar as market participants came to realize that the Fed would purchase only \$600 billion dollars of assets rather than the \$1 trillion reportedly anticipated by market participants at the time of the previous forecast. Of course, when we envisioned a process of gradual learning about the ultimate size of the Fed's asset purchases, we were thinking along the lines of six months, not six days. So in this projection, we pulled forward the effect of that learning relative to our October forecast.

As Brian noted, that wasn't the only story behind the rise in long rates. Rates also appear to have gotten a boost from the prospect of a somewhat more stimulative fiscal policy and more favorable assessments of the pace of recovery in the United States and in several key foreign economies. A stronger stock market and higher prices for oil and other commodities also appeared to have accompanied the brightening outlook. From the perspective of the forecast, higher rates and the stronger dollar cushioned some of the effects of the factors pushing up on aggregate demand.

Turning to the inflation outlook, core PCE inflation has run below our expectations thus far in the second half of the year. We estimate that these prices rose at an annual rate of $\frac{3}{4}$ percent in the third quarter and at a $\frac{1}{2}$ percent pace in the current quarter. We had been expecting increases at an annual rate of about 1 percent over that period. Some of the surprise can be explained by transitory factors, most notably a drop in the erratic nonmarket component in the third quarter and an outsized decline in the annual setting of Medicare reimbursement prices in the fourth quarter. This morning's PPI for November, which has another reading on hospital services, didn't seem to change this story much, but we'll have a better fix when we get details later today.

These special factors can't explain all of our miss, so we also took a small signal about the underlying pace of inflation from the string of recent low price readings. As a consequence, we reduced our forecast of core PCE inflation by a tenth in 2011 and 2012, to 0.9 percent in both years. We made no change to our forecast for total PCE prices for 2011, as the lower projection for core inflation was offset by somewhat higher energy price increases. The projection for total PCE prices in 2012 was lowered 0.2 percentage point, because of both lower core prices and lower projected energy prices. On the whole, the inflation projection is not much different from the one that we delivered to you in October.

In fact, much the same can be said for our entire projection. Yes, we had some surprises in the data, in financial developments, and in fiscal policy over the past six weeks. But our basic outlook remains the same. We believe that a modest recovery continues and that it is likely to gradually pick up its pace as the process of repair and adjustment to the enormous financial shock of two years ago proceeds. I'd say we are a little more confident of that assessment now than we were a few months ago, when the incoming data were heavily tilted in a darker direction. But as events in Europe over the intermeeting period have demonstrated, many obstacles could still deflect the economy from the path of gradual improvement that we are projecting.

Indeed, as I recently reviewed the staff's forecast performance over the past year, I began to feel considerable sympathy for the lady inside the GPS unit of my car who seems to be constantly barking out that she is "recalculating" as my driving disappoints her expectations [laughter]. We've had to do our share of "recalculating" this year in response to an economy and to exogenous events that often seemed to deviate from the path that we had anticipated. Somehow, I suspect that, as Santa reviews our performance, he won't show me as much sympathy as I have come to feel for my GPS lady. If that is the case, I'll just have to make myself content in the knowledge that, given the steep rise in commodity prices over the past year, the lump of coal that he is likely to leave in my stocking will be considerably more generous than anything I will be receiving from the Federal Reserve [laughter]. Nathan will continue our presentation.

MR. SHEETS. Developments in peripheral Europe have been a source of much anxiety over the intermeeting period. Through the first weeks of November, markets were roiled by concerns about mounting losses and large-scale deposit flight in Ireland's banking sector. Left with few alternatives, the Irish authorities agreed to an external assistance package, which included €45 billion from the European Union and €22.5 billion from the IMF. These resources should be sufficient for the Irish government to meet its funding needs for the next couple of years and to backstop the banking system. Nevertheless, even with this package in place, the sustainability of the country's debt remains in question. A continued commitment to disciplined fiscal policies and a further stabilization of conditions in the banking sector both seem necessary to avoid a restructuring.

After the announcement of the package for Ireland, a strong sentiment of “who’s next?” pervaded the markets, with Portugal and Spain seen as the leading candidates. But spreads also rose noticeably for Italy and Belgium, both of which have elevated debt-to-GDP ratios. Market tensions eventually calmed some after the ECB’s announcement on December 2 that it would extend its special term-refinancing operations through the first quarter of 2011 and following reports that the ECB had stepped up its purchases of Irish and Portuguese debt.

A key concern is the extent of the vulnerabilities in Portugal and Spain. Portugal suffers from labor market rigidities and other structural problems that severely constrain growth and consequently raise serious doubts about its medium-term fiscal outlook. Reinforcing these concerns, the government’s implementation of its fiscal consolidation program has been lagging. Moreover, market unease about the Portuguese banks’ large exposure to the government’s debt has left the banks highly reliant on ECB funding. Given these vulnerabilities, we believe that Portugal is likely to require a bailout package. By our reckoning, around €60 billion would be needed to cover most of the government’s cash flow needs for several years and to provide support to the banking system. Such a program should be conditioned on enhanced fiscal discipline and, most important, on structural reforms to improve the country’s growth prospects.

We are somewhat more hopeful about Spain, but—given that its economy is nearly twice the size of Greece’s, Ireland’s, and Portugal’s combined—the consequences of full-blown turmoil there would be much more severe. Spain’s deflating housing bubble has created balance sheet problems for the regional savings banks (*cajas*). But the country’s large internationally diversified banks are generally still seen as healthy, and its fiscal situation is stronger than that of the other peripherals. Indeed, in our baseline debt sustainability exercises, Spanish debt tops out at a relatively modest 75 percent of GDP, which leaves some wiggle room for either larger-than-expected losses in the banking sector or higher-than-anticipated borrowing costs.

We believe that it will be necessary for the European authorities to adopt crisis-management policies along the following lines. First, building a firewall around Spain should be a central objective. To extinguish any doubts about the adequacy of resources available to support Spain, as well as Portugal, the European authorities need to earmark another €200 to €300 billion, in addition to the roughly €375 billion of available EU and IMF resources. Second, a rigorous stress test and a capital backstop to fill balance sheet holes are necessary to address lingering worries about the European banks. The challenges here are significant, however, as a credible stress test will need to consider severe and potentially unsettling scenarios, including write-downs on some sovereign exposures and further declines in real estate prices in certain countries. Third, the ECB needs to continue with its accommodative policies and bond purchase program. Finally, the peripheral countries should move forward with their fiscal consolidation efforts and with structural reforms to strengthen medium-term growth. Our forecast envisions—perhaps optimistically—that the

European authorities will manage to take these (or similar) actions and that such steps will be sufficient to keep the crisis contained.

Some observers have called for even more comprehensive crisis-management strategies. One such approach would be an EU sovereign debt sustainability exercise with required haircuts if a country's debt were deemed unsustainable, perhaps coupled with an EU guarantee of the country's post-haircut debt stock. Such an approach would address market concerns about sovereign sustainability, but could create other problems. Judgments regarding debt sustainability are notoriously difficult: Greece's debt burden is clearly unsustainable, but such assessments for Ireland and Portugal are much murkier. In addition, the prospect of imminent haircuts could kick off market runs and create uncertainties about the financial viability of entities holding the debt, including European banks and potentially the ECB.

Spillovers from the recent stresses in peripheral Europe have been largely contained to date. Core euro-area economies have continued to record solid economic growth, and the deterioration in global financial markets that we saw in the spring has generally not recurred. But a further weakening of conditions would pose notable risks. While the direct claims of U.S. banks on peripheral Europe seem manageable, U.S. banks have potentially sizable market risk exposures to the peripherals. Moreover, the U.S. financial system has significant claims on core European borrowers and would be hurt if the crisis spread more broadly. Finally, should Spain come under attack, the crisis might potentially snowball into a broader run on sovereign debt that could affect Italy, Belgium, the United Kingdom, and perhaps other countries as well. With this warm thought in mind, I would ask all of you include in your letters to Santa a request for a quiet and crisis-free holiday season.

Turning now to the rest of the global economy, we have been struck by the firm tone of the recent data. For example, activity in Germany, which accounts for 30 percent of euro-area GDP, has remained surprisingly resilient: Retail sales surged in October; confidence and PMIs rose in November; and the weaker euro will help fuel Germany's export machine. Chinese trade—both exports and imports—jumped up further in November, and every indication is that the Chinese economy is humming on all cylinders. In response, the authorities there are now moving with increased vigor to prevent overheating. In other emerging Asian economies, a marked rebound in November PMI data suggests that activity in the region is strengthening along with China. Consistent with these observations, the International Energy Agency recently marked up its 2010 forecast for global oil consumption, while demand for commodities more generally appears firm. And readings on foreign inflation have surprised us on the upside, reflecting a recent acceleration of food and energy prices. Notably, however, core inflation abroad has remained more subdued.

Of course, there are still a number of soft spots out there. But, taken together, the recent data generally point to a moderately paced recovery abroad, in line with our

expectations. As such, our forecast for foreign activity is little changed from the October Tealbook, with growth this quarter coming in at 2¾ percent and then strengthening to 3½ percent by 2012. Indeed, a striking feature of our forecast is that the modal outlook is still reasonably hopeful, even as the stresses in peripheral Europe have markedly increased the tail risks.

Finally, trade data for October, which we received last Friday, showed a notable pickup in U.S. exports, again pointing to solid foreign demand. Imports, however, were softer than expected. For the fourth quarter as a whole, we see exports expanding at a 10 percent pace, but imports are poised to contract sharply, reflecting problems with the BEA's seasonal adjustment for oil and some payback after two quarters of extraordinary strength. We now see net exports adding 2½ percentage points to GDP growth in the fourth quarter, about ¾ percentage point more than in the Tealbook. Over the next two years, real exports should increase at an 8¼ percent pace, supported by solid foreign demand. With the dollar up just slightly since the last Tealbook, the lagged effects of the dollar's previous declines should also provide support. Import growth is projected to gradually rise, moving above 6½ percent by 2012, in line with the U.S. recovery. All told, we see net exports making a small positive contribution to U.S. GDP growth over the next two years. Thank you, and we're now happy to take your questions.

CHAIRMAN BERNANKE. Thank you very much. Questions? President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I have a couple of questions for Nathan. The first is a narrow one: To what extent is there an Iberian problem? That is, if Portugal really gets into serious trouble, does it almost automatically create contagion that draws Spain into it?

MR. FISHER. Be careful with your answer, because the questioner has a Spanish son-in-law.

MR. LOCKHART. But he does have a job.

MR. SHEETS. There are several channels. Let me just highlight two that I think are important. One is that the Spanish banks have substantial exposure to Portugal. So if conditions in Portugal were to deteriorate significantly, and credit quality were to decline correspondingly, that would be a further hit on the Spanish banking system. And it really is the case that the banking system in Spain is the point of vulnerability. There are two separate issues regarding the Spanish bank vulnerability. The first is the cajas and their exposure to the falling real estate

market. How much more is that real estate market going to fall? The second issue is just how rock solid are BBVA and Santander, the two biggest banks that compose almost half of the Spanish banking system by assets? To date, their CDS premiums are somewhat elevated relative to other institutions, but not significantly so. And if we start seeing signs of significant softness in those two institutions, it would be grave.

Second, I think there's a sentiment channel and a demonstration effect, namely, that, if Portugal comes under stress, that will cause people to be more risk averse and more worried about what else is going on in peripheral Europe and could trigger a pullback. I think it's very likely that Portugal is going to need a program, and I think that's why it's imperative that the Europeans move now to get the funds in place, so it's clear that they can support Spain, if necessary.

MR. LOCKHART. My second, broader question is, again, for Nathan. When you did a European recession scenario in the summer, it had a more severe impact on the U.S. economy than the one that is in the Tealbook this time around. You've touched on this a little bit, but could you give a deeper sense of what has changed, and why we see less impact on our economy in the current circumstances?

MR. SHEETS. If things got bad in Europe, I wouldn't want to rule any possibilities off the table, including the scenario that we looked at in June. I'd say the reason that the spillover was somewhat less pronounced this round is simply because, to date, in this episode relative to the spring, the financial market feedback effects have been less. Maybe there has been some financial market adjustment or repositioning by U.S. financial institutions. So far, at least, we haven't seen the same intense effects in the United States. One particularly notable difference is that in the spring we saw very substantial declines in U.S. equity prices, whereas U.S. equity

prices over the intermeeting period are up a little bit. But that's something that we're obviously watching very closely, and the situation could change very quickly to much more intense spillovers and sympathy effects in U.S. markets, similar to what we saw in the spring.

CHAIRMAN BERNANKE. President Rosengren.

MR. ROSENGREN. I have a question on the house-price adjustment. As I was reading the financial stability memos, particularly the one on the banking sector, I noticed that it highlighted that the percent of bank assets in 3-, 4-, and 5-rated institutions had become quite elevated, approximately where we were the last time we had "headwinds" in the banking sector. So, when we think of a house-price decline that's as large as what you're talking about, combined with the elevated percent of bank assets in 3-, 4-, and 5-rated institutions, do we still assume that the headwinds in the banking markets are going to subside over the course of the year? And what are you assuming about securities that are tied to real estate, given your new information on the pricing of housing?

MR. STOCKTON. In this forecast, we still assume that there will be some improvement in bank lending conditions over the course of the coming year. We think the situation in the mortgage market is still going to be very tight—in fact, partly feeding into our downward revision to housing was a view that we weren't going to see as much improvement there as we thought.

Because of the weaker house-price forecast, we've upped our forecast of home foreclosures, which implies a hit to banking associated with our more negative outlook for house prices. I don't have the specifics on individual institutions in terms of how that plays out, but, as I indicated, we do see the house-price forecast as having more than just a housing effect. It has

an effect both on consumer spending through the wealth effect and on lending conditions and spending through the banking sector.

CHAIRMAN BERNANKE. Any other questions? [No response] Okay. If not, we're ready for our go-round. And I have President Kocherlakota first.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. Our Public Affairs Department has been gathering information for its 2011 Ninth District forecast. In doing so, they have found a growing sense of optimism since the end of August. In general, it seems that businesses are beginning to be more willing to think longer term, three to five years out. They're beginning to make plans to hire, increase space, and add equipment. This optimism is widespread across most sectors of the economy. Mining is strong, due to solid prices and increased demand. Farmers had a great harvest in terms of prices and yields, and this spilled into warehousing, transportation, food processing, and energy. More interestingly, both manufacturing and services are looking to expand. However, the general level of optimism does not extend into construction. A big caveat, of course, is sustainability. I'm describing a pattern that has become apparent only over the past three months, and business attitudes certainly remain susceptible to shocks of various kinds.

At the national level, I will focus on an issue that preoccupied us a year ago: How much slack is there in the economy? Right now, we are following a highly accommodative monetary policy, and this accommodative policy is consistent with typical rules, because current output is so much lower than our typical measures of potential output. Hence, as we decide upon future monetary policy actions, we need to have good measures of potential output.

The Tealbook measures potential output largely by focusing on supply-side issues, and I view it as essentially using a production function approach that tries to gauge maximum

sustainable production in the economy, given the existing labor force and capital stock. So its measures would take account of changes in productivity or changes in the quality of the labor force, but they certainly abstract from shocks to demand. This approach is definitely a common one—common enough, I think, to be called the conventional one. But it may not be foolproof. Consider, for example, a 30 percent to 40 percent fall in home prices, along the lines that this country has experienced. This shock is going to lower the wealth of many people. Let's focus, though, on retired people. Those people will demand fewer goods, and in so doing they will lower output and employment in the economy as a whole. Using monetary policy to try to boost output above this level would lead to inflationary pressures.

I want to be clear about a couple of things. First, the issue I'm raising is entirely distinct from my comments about the possibility of increased mismatch in labor markets, and I'm hoping that we'll get more clarity on the issue of mismatch at our next meeting. And I'm certainly not arguing that potential output is always equal to observed output. Inflation and inflation expectations adjust sluggishly to shocks, and this sluggish adjustment creates a need for monetary policy interventions. What I am saying is that the right measure of potential output is the level of output that would exist in a hypothetical world in which inflation and inflation expectations were fully flexible. Once you define it this way, it's clear that potential output has to move in response to both supply and demand shocks.

With this in mind, is there any systematic way to take account of shocks to demand when we measure output gaps? Many formulations of the Phillips curve provide a linkage between inflation dynamics and output gaps. And this linkage is an attractive one, because it's robust—it's robust to the demand shocks that I mentioned, and it's robust to the mismatch possibilities that I mentioned. In Minneapolis, we've been trying to use a particular kind of Phillips curve,

the New Keynesian Phillips curves, to impute measures of the output gap. These equations link current inflation to inflation expectations and the output gap, which is really a marginal cost gap. Then, when we take measures of inflation expectations from the Cleveland Fed, we can compute estimates of the output gap. We've done this using both simple New Keynesian Phillips curves that ignore trend inflation and more sophisticated ones that take account of trend inflation. There's certainly some heterogeneity of results, but, in general, the implied measures are less negative than the Tealbook's estimate of negative 6½ percent. I'd say that these measures certainly are meant to be suggestive at this point, but my main message is that the measures of potential output that are relevant for a monetary policymaker should take into account demand disturbances, and ones that ignore demand disturbances are likely upwardly biased. The second message, which I'll deliver with considerably less force, is that, given the observed behavior of inflation and inflation expectations, it's possible that these biases may well be large.

So as we consider changes to our monetary policy stance, I believe that we should put some weight on these possibilities. For my part, as I'll discuss in more detail in the next go-round, these possibilities lead me to shade my estimate of the output gap from the Tealbook's, which is around minus 6½ percent, up to something closer to minus 4 percent instead. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you very much. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. The news regarding business conditions in the Third District is on balance moderately positive and consistent with a modest recovery scenario. Residential and commercial real estate and construction, however, continue to lag behind the recovery, as these were the hardest hit during the recession. Overall, employment in our three states rose in October, especially in Pennsylvania. Our November Business Outlook

Survey, released just after the last FOMC meeting, indicated a sharp increase in the current activity index—it rose from plus 1 to plus 22.5. Manufacturers' orders and shipments indexes also rose in November. About 40 percent of the firms plan to increase spending on plant and equipment over the next 12 months—that compares with 16 percent this time a year ago.

Regional business contacts expect a modest pace of improvement in the months ahead. Our December survey, which remains confidential until noon on Thursday, gives similar readings to our November results. The general activity index rose from the 22.5 to 24.3 and is very consistent with values seen in historical recoveries. And, by the way, the market's expectation for that number was 10. New orders also rose significantly in December.

As I noted six weeks ago, our regional price data do not raise concerns regarding sustained deflation. In our November Business Outlook Survey, manufacturers continued to report higher input costs. In addition, in November, both the future prices paid and the future prices received indexes rose significantly, indicating that firms are expecting prices to be rising, not falling, over the next six months.

Retailers generally report that wholesale prices are stable, but many contacts noted that foreign suppliers have raised prices for many products being ordered now for delivery next year. Again, our December survey, which will be released Thursday, indicates that even more participants are reporting higher prices paid as well as higher prices received. The prices paid index rose further from 34 in November to 51.2 in December, and the prices received by firms actually turned positive, increasing from minus 2 in November to plus 10 in December. That is its highest reading since mid-2008.

Turning to the national economy, incoming data strengthen my belief that the economy is emerging from the soft patch we encountered this summer. Third-quarter real GDP was revised

up; manufacturing and business equipment spending have picked up; consumer spending and employment continue to expand and have defied the pessimism of those who saw the economy heading for a double dip.

The recent trade numbers indicate that foreign demand for U.S. products has picked up, perhaps boosting fourth-quarter GDP growth more than previously thought. Thus, I continue to believe that the fundamentals are in place for real GDP growth to accelerate to close to 3½ percent in 2011, even in the absence of any new fiscal stimulus. I expect the tax package, if it passes, to add only modestly to this growth in 2011, and, because of its temporary nature, to generate a small, but not significant, give-back in 2012.

Financial market indicators have attracted a good deal of attention in recent weeks. However, I would caution against ascribing too much of the evolution of interest rates over the last couple of months to either anticipation of or the announcement of our LSAP program. Many factors have likely affected the decline and then the rise in yields over the last two or three months. We've had the much anticipated and discussed lead-up to the results of the elections for the House and Senate. We've had a flare-up in the European sovereign debt crisis, which probably resulted in some flight to quality, only to be followed by another "stay" of a restructuring "execution." And, finally, we experienced a steady improvement in the economic data, some of which could not have been the result of either the anticipation or the implementation of our LSAP. Disentangling the influences of these factors on yields is likely to be a very difficult, if not impossible, task.

The latest readings on core inflation have come in slightly lower than expected and may raise concerns among some about the possibility of sustained deflation. But there is no such indication as yet in either market- or survey-based measures of inflation expectations, and the

likelihood of sustained deflation is no higher now than it was at the time of our last meeting. And survey measures indicate that the probability of deflation is lower now than it was in late 2008 and in 2009. In addition, I would note that monthly inflation estimates tend to be volatile, and, in particular, the PCE estimates often get revised up. Thus, I continue to expect inflation readings to be higher, more in line with our objectives, as we go through 2011.

In summary, conditions in the Third District, as well as the nation as a whole, seem to me indicative of a modest recovery, which I expect to continue and accelerate somewhat next year. The economic news we have received thus far does not give me cause for worry about encountering any sustained deflation in the near future. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, let me cite my favorite economist, myself. [Laughter] I'll read from my last intervention at the last FOMC: "My contacts report more things are moving in the right direction than in the wrong direction. None speak of the double-dip risk in the United States, and none are budgeting to deflation. Bottom lines are healthy. Conditions are improving slightly, but continually, and are expected to continue to do so." I'm going to spare you a protracted recitation of my soundings.

MR. KOCHERLAKOTA. We all have it memorized, so that's fine. [Laughter]

MR. FISHER. Thank you. I am, however, going to say that uniformly there has been a shift in tone. If anything, I would take out the word "slightly" from the recitation I just gave. One sector is an exception, namely, the rails, because you always have a downturn at this time of the year—it's a seasonal adjustment. But, otherwise, to a person, my interlocutors are seeing improved confidence in final demand. According to my retailer contacts, airlines, express

shippers, IT firms, and manufacturers of household products, household spending, including discretionary spending, is expanding.

One of the key indicators I like to look at is mall traffic. No one has to go to a mall. You don't have to buy anything out of necessity at a mall. The last seven weeks we have seen growth in mall traffic. It's reflected in MasterCard's internal data, which, again, I like to remind people is confidential, but we have developed a relationship of going through and parsing that data and reading the entrails. November retail sales, ex-auto, ex-gas, year over year, were up 5.2 percent versus 2.7 percent in October and 1.3 percent in the third quarter. So there appears to be a pickup in final sales, and that is new data and unlike the slight pickup that I reported earlier. There seems to be improved confidence. I fully suspect you're going to hear that from the Business Roundtable and others who are going to be making these pronouncements shortly.

In talking to my interlocutors, none see a real threat of deflation. While they maintain they do not have the power yet to price more aggressively, they would like to, Charlie, but they don't yet have it. We know from the recent data they are even more flush with liquidity than they were before. They are beginning to put some of it to work, primarily to drive productivity enhancement, though some, Mr. Chairman, are beginning to report and budget for payroll expansion.

Anecdotal input from my contacts, triangulated with the work of our research staff, leads me to think that the Board staff is underestimating economic growth for 2011, though unemployment, I think, will remain sticky despite a pickup in the desire to hire. And it strikes me that we will see growth in the first quarter and second quarter 2011 close to 4 percent, with inflation remaining slightly under the wire of 2 percent. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. The tenor of the incoming data has been positive, though not much different from what was expected in most forecasts, and it is broadly consistent with only a very gradual recovery. Even with the announcement of both fiscal and financial stimulus, the Tealbook is little changed from our November meeting. For the final quarter of 2012, the Tealbook forecasts unemployment to be 0.1 percentage point higher and core PCE inflation to be 0.1 percentage point lower than at the November meeting. Similarly, the Blue Chip forecast is not much different from last month. Thus, despite the move to more accommodative monetary and fiscal policy, we are still expecting only very slow progress on an inflation rate that is too low and an unemployment rate that is too high.

While the inflation forecasts are little changed, the decline in core inflation has continued. In fact, the core CPI inflation rate for the last 12 months, at 0.6 percent, is the lowest since 1957 when the index began. As the Tealbook inflation box shows, the diffusion index and a wide variety of inflation measures provide ample evidence of continued disinflation. While commodity prices have certainly increased, there seems little ability to pass these increases on to final goods prices, given the significant slack in the economy. Discussions with businesses around New England highlight that they have used productivity gains to offset rising commodity prices, because they see little ability to pass price increases on to their customers.

Our announcement of further large-scale asset purchases has spurred considerable discussion about the potential for them to create undesirable inflationary pressures. For our excess reserves to translate into future inflation or debt-financed asset bubbles, banks would have to increase lending significantly. This is not what we see. In the United States, Japan, and the United Kingdom, lending has remained very weak, despite the infusion of liquidity by central banks in all three countries.

In addition, discussions with bankers do not indicate that a significant upsurge in demand in this country is imminent—rather, quite the opposite. Bankers continue to experience weak demand for loans, particularly among smaller businesses. While I do not expect these trends to reverse any time soon, if they do, they should be quite observable, allowing us to take appropriate actions when that becomes necessary.

With the outlook little changed, it is probably worthwhile thinking about the risks to the forecast. The Tealbook highlights a much weaker path for house prices. While I am not particularly confident of our ability to forecast house prices, significant further declines in house prices have the potential to weaken bank balance sheets significantly, further complicate the ability to remove the foreclosure overhang, and cause consumers to retrench as their confidence ebbs along with their housing wealth.

A second concern is the increasing difficulties with state and local finances, which some have compared with the problems with peripheral nations in Europe. While I do not think the analogy to Europe is particularly apt, these problems share one common attribute, and that is that the lack of political will to address problems may make the problems significantly worse.

My biggest concern remains Europe. With announcements in late spring regarding Greece, many hoped that the problem would be postponed for several years, and that Europe would find a way to muddle through. As events over the last month have made clear, the situation remains fragile, and confidence in banks remains tenuous. Clearly, the Irish stress test of their banks did not uncover the significant weakness in Irish banks, and concern with other stress tests has contributed to some creeping up of interbank rates. Should European problems become more severe, I do worry about the transmission through U.S. banks and money market

funds. U.S. prime money market funds with \$1.6 trillion in assets have European exposures that now account for over 60 percent of their assets. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. The general sentiment of my Fourth District business contacts hasn't changed much since our last meeting, and my outlook hasn't changed substantially either. Despite the positive tone set by some of the recent data releases, the weak November employment report highlighted that labor markets are still struggling for sustained gains, and the pace of the recovery remains slow.

Even though we saw some positive retail sales numbers, my retail contacts noted that they are seeing a problematic pattern. They suggest that much of the recent progress in retail sales has been in the high end of the market. In their accounts, relatively well-off households are purchasing more luxury goods. They say that many of the mid-market households are shopping down in the value chain by sticking to necessities and selecting house brands or other value-priced items. My contacts note that retail sales growth can potentially look pretty strong with this increased spending by wealthy households, but retailers believe that the longer-run growth in personal consumption expenditures is going to require more progress on the other side of the income distribution, and job growth there remains the key. This concern tempered several of my contacts' outlooks in the face of the relatively positive sales figures.

Banks in my District report that business lending has not grown very much and that new commercial originations are being driven primarily by companies in the energy, health care, and manufacturing sectors. Merger and acquisition activities have also picked up and are a growing source of credit demand. My banking contacts also reported that their credit quality was stable or showed a slight improvement. But as the financial stability memo highlights, the U.S.

banking industry faces a wide range of potential risks. Nationally, many of the smaller banks have large amounts of nonperforming assets on their books, and, as was noted earlier, a very large number of banks still have adverse ratings.

My outlook for employment is also little changed from our last meeting, and my business contacts have tended to corroborate my outlook for sluggish employment growth. Although there has been some improvement in hiring, especially among manufacturers, employers are inclined to hire on a temporary, part-time, or special project basis. Employers also seem more interested in hiring recent college graduates, and this is interesting because the unemployment rate, even among young college graduates, is still nearly double its pre-recession levels. The higher unemployment rate seen in this group seems likely to be cyclical, unless you think that the recent college graduates are less prepared than those who graduated before the recession.

My staff's analysis continues to show that the elevated overall unemployment rate is a cyclical phenomenon. They also note, though, that the job-finding rate in our economy has been trending downward for the past 25 years, which is going to slow the rate of convergence toward the natural rate of unemployment relative to past expansions. The lower job-finding trend does increase the implied natural rate of unemployment, but it only moves up to 6 percent.

On the inflation front, I have found little comfort in the most recent data that the disinflation process is nearing an end. At our last meeting I reported that my staff had been looking into the growing distinction between the CPI and the PCE price index, and suggested that the lower CPI figures might be a more accurate indicator. Over the intermeeting period, the core PCE inflation measures fell sharply, including the median PCE, and they are now more in line with the already very low core CPI number. On a more positive note, market measures of expected inflation, which began moving up prior to our November meeting, stabilized in a

comfortable range. The expected five-year inflation rate derived from inflation swaps has now settled near 2 percent, and break-even rates from TIPS show a similar pattern.

Regarding the risks to my outlook, my view is that the risks for both inflation and output remain to the downside. I continue to be concerned that our options for responding to falling inflation are more limited than our options should inflation head higher. And a variety of cautions—from the continued weak banking conditions to the sovereign debt crisis in Europe—lead me to see the risk for output growth also weighted to the downside. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. Business contacts in the Eighth District are cautiously optimistic about prospects for 2011 on balance. Early reports on holiday retail sales are positive, and I hope that the coming year will produce a relatively good outcome for consumer spending. The positive holiday reports extend from smaller retailers operating in the Eighth District to national and global retailers that are based in the District. So, on this dimension, I agree wholeheartedly with President Fisher. Large transportation companies in the Eighth District report brisk business across regions of the United States and globally. In many cases, this is consistent with the improving outlook for U.S. consumption.

I convened a Health Care Industry Council in recent weeks, composed of a variety of participants in the industry in the Eighth District. The general view is that there is a high level of uncertainty, even inside the industry, about how health-care reform will play out and what the implications will be for the nature of the industry going forward. This seemed to be consistent with the views of business contacts outside of health care who claim that without more clarity in this dimension they are cautious about significant investments and additional hiring.

Turning to the national outlook, my view is that it has improved somewhat. I hope that 2011 will be a little stronger than may have seemed likely even a few months ago. I agree with President Rosengren and many others here that one of the key risks going forward is the ongoing sovereign debt crisis in Europe. I'm not very confident that the contagion will end when the next country on the block is Spain. I think markets will test European resolve severely at that juncture. I think the Europeans do have significant resolve to meet the challenge and some tools that can be deployed, including ECB purchases of sovereign government debt, but in general the situation seems very shaky to me.

Another key risk for 2011 is the level of federal debt and fiscal deficits here in the United States. The decision of the President and the Congress to add to, rather than to subtract from, the level of U.S. debt outstanding gives me pause. U.S. debt and deficit numbers are not much different from those of the very countries that are in trouble today in Europe. We, as a nation, are pushing very hard on our credibility in international markets. It could go badly and derail further U.S. recovery prospects.

I want to make a few remarks on the effectiveness of asset purchases so far. My view is that these purchases were very effective, in the sense that in the run-up to the November decision we observed classic monetary easing effects in financial markets. So, between the Chairman's speech on August 27 at Jackson Hole and the decision at the last FOMC meeting on November 3, we saw real yields decline significantly—the five-year TIPS yield hit minus 50 basis points at one point. We saw an increase in inflation expectations that was significant. Inflation expectations, according to five-year TIPS yields, were about 120 basis points during the summer; today they're around 160 basis points, so that's a 40 basis point increase in inflation expectations. I prefer the TIPS measures of inflation expectations to the survey measures. I

don't think the survey measures are significantly sensitive to market events. We saw an increase in U.S. equity prices, broadly speaking, which continues to this day. And we saw a decline in the dollar, which I would regard as a normal side effect of policy easing, given all else is held approximately constant in the rest of the world.

I think these effects were fairly clearly due to the anticipation of further asset purchases. Surely, there are other things going on in the world, but if you follow financial markets, then it was pretty clear that they were focusing on the actions of this Committee. These effects are about as classic as it gets for financial market effects of an easing of monetary policy. It was as if we had lowered the federal funds rate by, say, 50 basis points or we were anticipating lowering the federal funds rate by 50 basis points. After the November 2–3 meeting, as often happens in financial markets, attention goes forward and adjusts. So we saw an increase in longer-term nominal yields.

I thought the Tealbook summary of this issue was very good, but I'm just going to make a few comments. There are, of course, many factors that are affecting nominal yields. I think the real outlook for 2011 has improved. That has increased real rates, perhaps substantially, and led to some increase in inflation expectations, although that probably is a little bit more minor. There has been a reassessment of possible policy paths that could be followed by the Committee in the first half of 2011, and there has been an announcement of a major fiscal package, perhaps against all odds, and that had a big effect on nominal yields as well.

An increase in nominal rates would also be associated with the success of asset purchases. If we're successful, we expect to have some influence on the real economy, which would cause real rates to rise, and they could rise in anticipation of those effects. And we expect and hope—or I hope—that inflation expectations will increase, not decrease and continue to go

down towards zero or below zero. Thus, the very success of the program would put upward pressure on nominal rates.

What do we conclude from this? A couple of things. First, I don't think asset purchases of this type are completely neutral, as is suggested by some theories. Going through these events over the last six months has shown that, whatever else is going on, these purchases do have major effects in financial markets. Second, the asset purchase program does put downward pressure on nominal yields. I don't think it could be any other way for purchases of this size. We are a major player in this market. But we are not targeting a particular rate or set of rates as we would under normal interest rate targeting. So, because we're not setting a target, and because there are many other factors that influence nominal yields, other things can happen. And the success of the asset purchase program will indeed put upward pressure on nominal yields, even as purchases put downward pressure on those yields. There's an old saying in monetary policy that looking at nominal yields alone is insufficient for evaluating the impact of monetary policy, and I think we have a classic case of that here. I'll stop there. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. On balance, the outlook for economic growth seems a bit better than at our last meeting. I have been heartened by a few more optimistic signals from the incoming data and from my business and community contacts. In addition, I think the prospect of greater near-term fiscal stimulus is a positive development and helps reduce uncertainty somewhat.

Still, in my discussions with contacts, their positive comments continue to have a somewhat special and one-off tone, as opposed to reflecting expectations of sustained stronger

growth. Automakers expect industry sales next year to be about a million units higher than in 2010, a healthy increase, but perhaps a plateau unless accompanied by a more pronounced improvement in household balance sheets and income prospects. And, currently, adding workers is not a priority for the auto sector. Heavy equipment manufacturers are benefiting from global demand for commodities and agricultural products. But, again, even in this sector that's doing so well, their hiring intentions are minimal. Clearly, the economic recovery is continuing, but I expect we will be dogged into mid-2011 by concerns over whether or not the economy is achieving escape velocity.

Specifically, escape velocity would ensure a self-sustaining growth path that moves us more assuredly towards our objectives for inflation and employment without a continuing strong push from policy. Still, I think the economy and policy have made progress since I began expressing stronger concerns last August, although the feasibility of the firewall around Spain in Nathan's discussion seemed troubling to me.

Turning to inflation, I agree with the Tealbook's analysis that transient price movements probably overstate the degree of disinflation over the past several months and that the current underlying trend in core PCE inflation is likely closer to 1 percent. Of course, because monetary policy acts with considerable lags regarding inflation, we always need to look at what the forward-looking inflation indicators are pointing to. Here's my list. First, considerable research has pointed to the inconvenient fact that statistical inflation forecasts have trouble beating a simple random walk forecast. If you accept this finding, then you would say today's low inflation experience is likely to be around for the forecastable future. Personally, I don't find random walk forecasts to be a constructive perspective when monetary policy is either very

restrictive or highly accommodative, but this finding has been mentioned often in the past, and today it implies very low inflation pressures.

Second, are we currently seeing cost pressures that might be forward indicators of higher inflation? Commodity costs have been in the news a lot. I recently met with a unique set of experts on commodities when I paid a visit to the headquarters of Caterpillar in Peoria. This is a large manufacturing company whose business today is thriving on high global commodity prices and the incentives for increased mining that go with those price signals, so they're really tuned into the commodity price picture. They're producing a lot of big machines that people are buying and shipping around the world. Nevertheless, their business forecasts for U.S. inflation are quite low. They believe resource slack will prevent high commodity prices from bleeding into our top-line inflation numbers. In addition, it is difficult to see any general upward inflationary pressure coming from labor costs in the current environment. After all, unit labor costs have been falling, and unemployment is high, although the coal compensation component seems to be rising. I thought that was one of Dave's best jokes.

CHAIRMAN BERNANKE. A total freeze on coal compensation. [Laughter.]

MR. EVANS. That is austere. Finally, what about inflation expectations? Survey measures of inflation continue to be low. TIPS break-even rates and inflation swaps have risen over the past several months. Still, the TIPS increases have only retraced the declines that occurred last spring and summer, and back in April before the TIPS decline, the Greenbook—it was a Greenbook back then—had a core PCE inflation forecast of 0.9 percent in 2010 and beyond. So, ultimate inflation pressures were quite similar. In sum, the risks of unacceptably higher inflation are small over the relevant policy horizon, and I certainly agree with your comments, Mr. Chairman, that we could address any unexpected and damaging inflation

developments quickly should they occur. However, at the moment I'm much more concerned that inflation will continue to run below mandate-consistent levels. In fact, it would be a very positive development if inflation rose more quickly, at least to 2 percent.

I just wanted to mention that I disagreed with Governor Warsh's characterization of the rise in inflation at the last meeting that he referred to as the nominal revenue channel. You know, that's more money illusion, and this finding that higher inflation would be beneficial comes out of fully optimizing models where there is no money illusion. By lowering real rates, such a development would help us to do better on our employment objective. It would change opportunity costs, and it is difficult to imagine strongly sustained higher inflation without growth in broad monetary aggregates, bank lending, and growth more generally. So, as of now, in my judgment, the pace of economic recovery and inflation outlook continues to be too weak to be consistent with our mandates for the relevant forecast horizon, but things are better today. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. Our District is growing and is similar to the nation in many, many ways. Our manufacturing sector has picked up. Our retailers are also seeing a pretty good season so far this year, and the responses we get are that things are steady or improving or improving nicely—those kinds of descriptors.

Two areas in our region, of course, are doing quite well. One is energy, and the other is agriculture. Energy is quite brisk. They're switching their activities from natural gas into oil. We're seeing many more efforts to bring oil out of the ground in the region, and that has put forward a little bit of a mini boom in parts of our region, which are actually expanding.

In terms of agriculture, this is now what I would refer to as a boom. We're seeing strong global demand; obviously there have been some shortages. Prices are moving up. Commodity prices are moving up well, and farmland values are continuing to climb rapidly. Across much of our area—and I think nationally as well—we are seeing substantial increases in land values over a year ago. In our area, the increase has been about 10 percent from a year ago, although obviously, it varies with the quality of the land. That's a 60 percent increase since 2005. Ratios of land values to rents—that's like a price-earnings ratio for us—in some parts of our region are now at 25, which surpasses the previous high in the 1970s. The high value-to-rent ratio implies a pretty low cap rate; based on what you assume about continued cash flows coming off that, the cap rates move back down to around 3 percent. When you speak with these individuals about their choices, they say, "It's a lot better than what I can get at a bank," and they certainly don't want to go into the stock market. So there's momentum.

The next question is: Who's lending on this stuff? Of course, banks are or the Farm Credit System, and, at the margin on the properties that are selling, they're lending about 70 percent of value, which is an accelerated value. They're saying that's not a problem because they're spreading that against other properties owned, but of course, all the properties are going up. So you get the signal that the loan-to-value ratios are still very modest. That's because, of course, you're moving the values up as you move the loan. So they are increasing their debt carry, and they are assuming not the highest prices in the commodities, but what they think is a good estimate of an average, which is much higher than historical levels. So, what do we tell our examiners? Do you look at land values of five years ago and say "this is too big a loan on it" and get the blowback from that? You probably won't. So this is going to continue to build, I suspect, over time, and it's a worry of mine.

Now, this is only one sector, I realize. My question is, given that we're trying to affect asset values, what other assets might we be affecting through our current policies? The point is that the national economy and the local economy are improving only modestly. I see inflation also as very low right now and increasing very modestly over time. But there is an allocation effect now going on as there is an asset value effect that's going on in different segments of the economy. I think we should be mindful of that this time around. Thank you.

CHAIRMAN BERNANKE. Thank you. First Vice President Moore.

MR. MOORE. Thank you, Mr. Chairman. After my unscripted reference to pop culture at the November meeting, my research director coached me on the importance of staying on message. [Laughter] I assured him I would do so, but I might have forgotten to disclose that I'd be adjusting the messages accordingly.

For the Twelfth District, the economic news is mostly the same. The high-tech sector, which was hit very hard during the recession, continues to rebound. Profits at major tech companies have improved, and one global online retailer is dramatically increasing its office space in the Seattle area. The San Francisco Fed Tech Pulse Index rose 1 percent in November, down from the 1½ percent average monthly increases seen earlier in the year. Homebuilders in the West remain very downbeat. One business contact said recently the word that best describes the homebuilding industry is "miserable," and, unlike the tech sector, no signs of pent-up demand have surfaced. One change is that retailers seem to be in a better mood. Our contacts tell us that sales were good around Black Friday and thereafter, but they also note that retailers were much more aggressive in discounting this year, and, of course, they were open for considerably more hours over the Thanksgiving weekend. So, comparisons with last year may exaggerate the underlying trend just a bit.

Turning to the national economy, the incoming data have been favorable. At the time of our last meeting, I was starting to worry that the economy might slow to stall speed, but I've been somewhat reassured by the recent spending data, which show growth in the second half of 2010 to be at or perhaps even a bit above trend. In addition, consumer confidence appears to be improving as seen in the latest reading from the Michigan survey, which puts us about back where we were in the spring prior to the soft patch. What's more, the recently announced fiscal package, assuming it becomes law, should provide a healthy boost to household spending next year.

The fiscal situation reminds me of a new piece of apparel that a national clothing retailer told us about recently. Over the past few years, a huge market has developed for a product called Spanx—there's an "x" at the end, not a "k-s"—which are body shaping undergarments for women. This year the product line has been expanded to include men's Spanx, a tight-fitting undershirt that can slim down almost any male figure [laughter]—present company excepted, I suspect. Where am I going with this anecdote? Well, as I observe reaction to the Deficit Commission's proposal, I can't help but feel that our country will resort to fiscal Spanx rather than a good, old-fashioned diet in addressing our long-term fiscal deficit.

The recent positive news on the economy has been largely offset by the significant tightening of financial conditions over the past month, particularly a jump in real longer-term interest rates. Overall my views on the outlook for growth and employment have not changed very much and remain reasonably close to those in the Tealbook. I expect growth to pick up to nearly 4 percent next year and a bit above that in 2012, as uncertainty recedes and confidence improves. But I don't think we'll see a surge in spending or hiring any time soon. A recurring theme from our directors has been that no business wants to overcommit at this time. One even

commented that the near-death experience we recently went through is likely to overshadow any expansionary desires for a very long time. I think the expansion is more likely to play out gradually, with sustained growth in household spending slowly chipping away at the reluctance of businesses to invest and hire. Like the Tealbook, I do not anticipate reaching full employment until the middle of this decade. One worrying development in the past month or so has been the escalation of the fiscal crisis in Europe. Although spillovers to the U.S. economy should be negligible, there is a risk that the crisis could intensify and spread, with more significant consequences for the U.S. economy as discussed in the Tealbook simulations.

Although I've been heartened by recent data on economic activity, the very low readings on inflation continue to be worrisome. No matter how you slice the data, whether CPI or PCE, total, core, median, or trimmed mean, inflation is on a clear downward trend, and measures of underlying inflation are running below 1 percent. Many of our business contacts report rising prices of materials and imported products, especially from China, which could potentially push up inflation here, but the economic climate does not appear to support much pass-through of these cost increases. The prevailing thought from our contacts seem to be that these cost increases will just put more pressure on margins for suppliers and retailers rather than lead to higher consumer prices.

Of course, the bigger problem is that we still have significant slack in labor and goods markets, putting more downward pressure on wage and price inflation. Indeed, over the past year, unit labor costs fell 1 percent on top of a 2 percent decline over the previous four quarters, and I certainly know of at least one sector in the economy that will have zero wage growth next year. Given the importance of labor costs for businesses, this downward momentum should offset any upward pressure from commodity and import prices.

Finally, longer-term inflation expectations remain relatively stable. Taking all of these factors together, our inflation forecast is similar to that of the Tealbook, with core PCE price inflation bottoming out around its current level, slightly below 1 percent, but, given the persistent slack in the economy, the risk of further disinflation down the road remains very real. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. Recent reports from contacts in the Sixth District were a little more optimistic about near-term growth prospects compared with what I heard going into the November meeting. As is appropriate for this time of year, we asked a number of directors and contacts about their early assessment of the holiday retail picture. We heard that post-Thanksgiving receipts beat retailer expectations, in some cases by a good margin. One contact with 85 shopping malls in the Southeast and Midwest said that mall traffic and sales through last Thursday were much stronger than expected.

I spoke a week ago to the CEO of one of the two leading parcel shipping companies, a company that claims to touch about 7 percent of the country's GDP daily. He said they had planned for traffic to be 3 percent over last year, but so far they're achieving 5 percent with the strongest week still ahead. He also offered the opinion that if the pace of spending and accompanying shipping carries into January, inventory shortfalls among his company's retail clients will require a step-up in production.

Notwithstanding this upbeat information, we came away from our board meetings and calls with a sense that very few firms are revising up their 2011 business plans. Contacts still cite a host of uncertainties as justification for their "wait and see" posture regarding new hiring and capital spending. We heard mixed messages, for example, regarding the proposed

investment expensing provision. One buyer of big-ticket transportation equipment indicated that accelerated write-offs would certainly cause his company to shift investment into 2011. Most others, however, said they would base investment decisions on business fundamentals and in general had not yet factored any substantial effect of the proposed stimulus into their 2011 forecast and plans.

Overall, I saw little in the incoming data and heard little in the input from contacts that would require a revision of my November forecast of slightly over 3 percent GDP growth for 2011. The basic outlook that most here in the room share—moderate and slightly accelerating growth, slowly reducing unemployment, and below desired but gradually rising inflation—still seems appropriate.

In our conversations with contacts over the last two weeks, we probed on the question of pass-through of rising commodity prices. We heard that, for the most part, commodity price increases are being absorbed at various stages of supply chains, some of which may be offshore. Few firms claimed any pricing power at present. I think the likelihood of accelerating disinflation, tipping into sustained deflation, has come down quite a bit since last summer. Measures of inflation expectations have moved back up, and the estimates made by my staff of probabilities of CPI deflation over the next five years have moved back down. I believe the inflation risks have become somewhat more balanced.

As regards the overall balance of risks, I'm not quite ready to abandon the cautious view that risks to the downside outweigh those to the upside, but my overall sense of risk has definitely been moving in the direction of balance. That said, I see tail risks as having fattened somewhat on the downside. To back up that statement, I'd cite the European situation and renewed pessimism about the residential housing sector. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Our last District survey, which came out in late November, showed gains in manufacturing and services but continued weakness in retail. Price trend indicators, both current and expected six months ahead, have all moved up notably over the last couple of months. More recent anecdotal reports also suggest that District economic conditions are improving but are still weak by historical standards. For example, we've seen a few encouraging signs in commercial real estate in the District. Vacancy rates appear to have topped out for office and industrial space, though the picture is mixed for retail space, and residential real estate sales are declining, but prices seem to be holding up.

At the national level, confidence in the economic outlook has picked up noticeably since our last meeting. Perhaps most important is the steady expansion in real personal consumption expenditures after they bottomed out in the second quarter of 2009 and increased at an annual rate of less than 2 percent over the rest of that year. Since then the growth rate in consumption has steadily risen. It has averaged more than 3 percent over the last four months. The gains we've seen in personal income and the stability of the personal saving rate are also encouraging signs. Of course, the November payroll report was disappointing, but I agree with the Tealbook that it seems inconsistent with the broader array of labor market indicators. On top of that, consumer confidence readings suggest a return of some of the outcomes we saw last spring. So unless the holiday season is quite disappointing, I think we should enter the New Year with momentum in household spending, and that should help broaden confidence in economic prospects.

The outlook for residential investment still looks bleak to me. The Tealbook quite notably has slashed its forecast for housing starts in light of the large inventory overhang, and I

think they have a more realistic path now. It must have been difficult to keep econometrically based forecasts from returning to recovery patterns much more like history, and I think estimating the magnitude of overhang relative to some sort of desirable stock of housing is inherently difficult. So I think they have a more realistic forecast right now.

Core inflation measures have fallen, certainly, in recent months, but measures of overall inflation, which is what we really care about, have moved in the opposite direction recently. Moreover, survey measures of inflation expectations remain stable, and TIPS-based measures have reversed most of this year's decline. As a result, I still think the downside risk to inflation is relatively small.

The Desk added more than \$100 billion in Treasuries to the SOMA portfolio since the November meeting. Let me just say that I find it hard to attribute much, if any, of the increase in the outlook to the quantitative easing at this point, so I agree with others who have made that point. Part of the way we think about the effect of these purchases involves their effect on the yields of the assets we're buying. Longer-term rates have moved up notably over the intermeeting period, but they declined notably before the last meeting, as President Bullard noted, in anticipation of our actions. As a result, it's hard to know how many basis points of easing we created or saved through this action.

The other way we think about the effects of asset purchases is in terms of Governor Duke's question from the last meeting, which was, essentially: What will induce banks to hold a higher level of reserves? Either yields on alternative liquid assets will decrease, or deposits will be created through lending or asset acquisition or both. It's probably too soon to get a quantitative handle on this channel, I think, but it's interesting to note that our most recent asset purchases began in the midst of a modest revival in money growth. So I think it's going to be

worthwhile to keep a careful eye on bank balance sheets and monetary aggregates in the months ahead.

CHAIRMAN BERNANKE. Thank you. I understand coffee is ready. Why don't we take 20 minutes?

[Coffee break]

CHAIRMAN BERNANKE. Why don't we reconvene? I will turn to the Vice Chairman.

VICE CHAIRMAN DUDLEY. Thank you, Mr. Chairman. I generally agree with the sentiment that has been expressed around the table, namely, that the U.S. recovery is picking up some momentum and that activity will also be supported next year by the likely shift in fiscal policy, so that the expansion does appear to be more sustainable and the downside risks do seem to have fallen a bit. The anecdotal reports that we've been getting from both bankers and retailers are encouraging, and they suggest that credit availability continues to improve and that households are more willing to open up their wallets. That, of course, was borne out by today's retail sales report.

However, I think we should be careful about not counting our chickens before they hatch for a couple of reasons. First, as others have noted, we're actually further away from our dual mandate now than we were at the last meeting, with a higher unemployment rate and a lower underlying trend for inflation, not just today, but, as President Rosengren pointed out, prospectively as well. Second, there are still plenty of risks out there that could impair economic growth. As David Stockton mentioned, the housing sector is under significant pressure, and most house-price indexes are showing renewed weakness. Nearly 25 percent of those households with residential mortgages are under water; that is, the mortgage debt currently owed exceeds the current value of the home. This widespread prevalence of negative equity increases

the likelihood of so-called strategic defaults by households. Some recent work by Fannie Mae shows how serious an issue this could be. For households with underwater mortgages that are delinquent 60 days or more, the fraction of strategic defaulters is larger for those with higher FICO scores, not lower FICO scores. This finding indicates the vulnerability of housing to strategic default. So the fact that tougher underwriting standards have led to higher FICO scores among recent vintages of borrowers doesn't necessarily mean that we're protected in this regard.

Also, there are still considerable risks to the macroeconomy stemming from developments in the financial sector. Nathan Sheets laid out the issues in Europe very, very well. To my mind, the European authorities have not yet taken steps to provide clarity about what happens in 2013 when the funding from the EFSF expires and the peripheral countries will need to regain their access to private markets, nor have they created a firewall around Spain. I think, really, those two steps may ultimately be necessary to stabilize the situation. The major issue in Europe, of course, is the question of who is going to bear the adjustment burdens. Is it the ECB or the EU governments? Is it the citizens of the weak peripheral countries? Or is it the holders of the bank and sovereign debt? I think that's what's making this crisis very, very complicated in terms of how it plays out. It suggests to me that the crisis will likely continue to intensify over time in a very irregular manner, with the required political and fiscal responses taking place only after sufficient market turmoil forces the necessary compromises. This, of course, is very dangerous for two reasons. First, the amount of distress is unlikely to be independent of the timing of the interventions—dawdling is likely to lead to worse outcomes than earlier intervention. Second, in the middle of the crisis, it's hard to reach good decisions, and there's greater risk of mistakes and political miscalculation. To date, the spillover to the U.S. outlook from Europe has been very limited. However, we can't rule out the possibility that

developments in Europe could deteriorate, and we could have a wider flight from risk, or that developments in Europe could put renewed pressure on our own financial institutions.

The second important risk worth attention emerges from the municipal bond market. Many people, when asked about systemic risk, put the municipal sector high on their list. This has gotten some more attention in recent weeks, as we've seen a very sharp rise in municipal bond yields. But this seems to be mostly about higher supply—actual and prospective—rather than about investor flight. The failure of the Congress to extend the Build America Bond program is leading to lots of this issuance before the program expires at the end of the year. The demise of this program also implies that the supply of traditional long-dated tax-exempt securities is likely to increase substantially next year. Because tax-exempt yields are driven mainly by appetite from the household sector, supply changes have typically had outsized impacts on relative yields in this market compared to other markets, such as the Treasury market. Although the rise in yield appears to be due mainly to supply effects, this doesn't mean the market is safe from other nasty surprises. In fact, by focusing more attention on the municipal bond market, I think the backup in yields makes the market more sensitive to adverse credit events, should those develop.

Finally, I want to return to something that I've been talking about for several months—the potential for credit rating downgrades of major U.S. financial institutions as the credit rating agencies think about the reduction in government support caused by the Dodd-Frank Act. This actually seems to have taken a turn in a more positive direction. Yesterday, apparently, Standard & Poor's told at least two major firms that their stand-alone ratings would be upgraded by one notch. This means that, if S&P subsequently reduces the government support by a notch, the

firms end up at the same place, and that's important, because ending up in the same place means they would not have their short-term debt ratings downgraded to nonprime.

S&P also said that it is going to defer any decisions about how the Dodd-Frank Act affects the uplift to ratings from the government until January. So the news is not settled yet. It's unclear whether S&P will treat all the major firms in the same fashion. But at least in the last 24 hours it has taken a turn in a more positive direction. So there seems to be somewhat less risk that we'll be in a situation where a large securities firm has a short-term credit rating below prime. That's something that makes me nervous, because no investment bank has been able to operate successfully for any extended period of time with a nonprime short-term rating. So we're not out of the woods yet, but things look a little bit better. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Yellen.

MS. YELLEN. Thank you, Mr. Chairman. The data we have received since our last meeting suggest that the economy is continuing to grow, and the mood among households and businesses is improving. My contacts have been cautious for quite some time. That hasn't changed, but more seem cautiously optimistic. Incoming data on retail sales and consumer confidence have surprised them and me to the upside. Consumer spending is hardly exuberant, but purchases of durable goods, a typical driver of recovery in the early stages of expansion, have picked up some steam, and I consider that encouraging. Given the exceptionally high ratio of household debt to personal income, I continue to think that the deleveraging process has some way to run. But the ratio of debt service to income and the financial obligations ratio have both declined substantially, and this may be creating greater latitude for a rebound in discretionary spending.

Of course, the performance of the labor market is critical to consumer spending going forward, and it is disappointing that unemployment ticked up during the intermeeting period. But other labor market indicators—initial claims, hours, and incoming data on hiring and job openings—suggest some modest ongoing improvement.

The fiscal package agreed to last week, if enacted into law, is also a positive for the near-term outlook. It should boost growth somewhat during the coming year and diminish the risk that fiscal drag could tip the economy back into recession. All of these factors point to an improved near-term outlook and some abatement of downside risk to the economic recovery. It seems likely that these developments account for a portion of the extraordinary backup in nominal Treasury and TIPS yields since the November FOMC meeting.

In spite of the many upside surprises during the intermeeting period, the news has not been uniformly upbeat. Two intermeeting developments that particularly concern me pertain to the housing market and the European debt situation. With respect to housing, as David explained, incoming data have been dismal, and, to my mind, they justified the substantial downward revision to projected residential investment spending in the current Tealbook. The discouraging tone of recent data accord with the truly downbeat reports we are getting from homebuilders. A group we met with here at the Board noted that prices in most markets have declined to the point where they no longer cover construction costs. So from a supply perspective, new homebuilding is largely unprofitable. Moreover, incoming data suggest that house prices remain under continued downward pressure due to the bloated supply of new and existing homes for sale, plus the huge shadow inventory reflecting foreclosures and seriously delinquent mortgages.

One of the most striking and worrisome revisions in this Tealbook pertains to house prices. A further 8 percent decline in house prices, as Tealbook now assumes, will affect consumer spending via wealth effects and negatively affect the ability of households to borrow. Such a large decline in house prices will also significantly increase the already large fraction of homes that are underwater on their mortgages, likely precipitating additional foreclosures and re-defaults on modified loans. Financial institutions remain quite vulnerable to losses related to real estate. Such dynamics could restrict the availability of credit, feeding further house-price declines in a worrisome adverse feedback loop.

Like Nathan, Vice Chairman Dudley, and others, I also see the European debt situation as very worrisome and posing significant risk to the recovery. The crisis has intensified in recent weeks. It now shows signs of spreading beyond Greece and Ireland to Portugal, Spain, and other euro-area countries. Strains have been evident in short-term funding markets. The pricing of sovereign debt suggests that markets now assume that restructuring for some countries, particularly Greece, is almost inevitable. And debt dynamics calculations for Ireland and Portugal suggest that the fiscal responses required for these countries to avoid restructuring are, frankly, draconian. Fiscal contraction on the scale needed would severely undermine their prospects for economic growth. Moreover, restoration of growth seems likely to require wage cuts to restore competitiveness, and such cuts, if they occur, would make the burden of the debt yet more onerous.

The European response thus far strikes me as inadequate to stem contagion, and I am concerned that these developments have the potential to precipitate a broad-based pullback from risk-taking, with spillovers into domestic asset prices. For example, we have seen negative co-movements between U.S. equity prices and peripheral European CDS premiums in recent weeks,

similar to the pattern that prevailed last spring. The alternative simulations in the Tealbook suggest that an intensification of the crisis could have significant implications for the outlook.

Finally, turning to inflation, the data on core inflation have once again surprised to the downside, and wage increases remain very well contained. Even if temporary factors are partly responsible for the very subdued inflation readings in the past few months, the pace of core inflation still seems to be moving downward, and, by any measure, the deceleration is broad-based.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. I don't think the most important development since we last met is the improvement in the real economic data, though that is certainly significant. I also don't think it's the continuing strains in Europe, which many of us have talked about for a long time, though that also is significant. I think the most important development since we last met is the change, level, and uncertainty with respect to longer-term Treasuries. The 10-year Treasury, the benchmark security, seems to have awakened from its slumber, and I suspect that we will be talking about the uncertainty in the rate increasingly going forward.

Now, for those of us who were supportive of the last round of policy action, it is tempting to say that all that has happened is all to the good and was perfectly predictable. For those of us who were uncomfortable with our last policy action, it is tempting to ascribe all bad facts and circumstances to it. I think that we all, myself included, need to resist that temptation. The move in Treasuries is difficult to disaggregate, but, in my view, it is most likely a mix of both benign and possibly less benign circumstances, and it bears significant watching.

Let me try to make three objective, dispassionate assessments about why the level and uncertainty of long-term Treasuries matters. First, I think it matters because it is the most

important asset anywhere in the world, and this value, this price, this uncertainty impacts every price everywhere in the world. Second, I think the value of the 10-year Treasury has a significant impact on other sovereign costs, particularly other stronger advanced foreign economies—I'm thinking about Germany, France, Britain, and others. There's a huge correlation between movements in our own sovereign rates and theirs. As we think about the funding costs for the periphery, it's not just the spreads that will bear watching, but also the all-in funding costs.

Third, and probably of most import to all of us around the table, the move in Treasuries matters because central banks' ability to control, to impact, to manipulate, to influence, rates along the Treasury curve, now appears more limited than the world had grown accustomed to over the course of the last several years. At least some market participants thought that we would be able to have a huge bearing on these rates in the next several years, and I think that notion is likely to be revisited in real time. We can push asset prices around for a while, but ultimately markets are going to determine these prices, and, I suspect, in the world of Treasuries, markets are increasingly going to be setting those prices, and we will be observing them. So I think it's that development which bears watching. Markets and real economic actors will have to adjust to the fact that the Fed's actions are less determinative of this 10-year rate, and it bears watching by all of us as we think about policy, both today and in the coming meetings. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. I have a collection of observations about lending. Starting with commercial lending, banks are seeing some demand in the upper ranges of the middle market, but there's also strong competition in that space. Overall, deposits remain

high and line utilizations low, indicating low demand over the short term from corporate borrowers.

The Survey of Terms of Business Lending indicates that interest rates have come down but that spreads are still unusually wide. I believe this may be due to the use of interest rate floors. Every community bank I called was using floors on most new and renewed loans, and the very wide spreads on smaller loans would indicate that the floors are especially prevalent on small business loans. But even one large bank reported that it used floors and that the larger, more complex, credits were the most likely to have those floors. So with floors around 5 percent, small business borrowers are likely facing pricing equivalent to a 2 percent fed funds rate. The reporting of small loans to businesses, which is a proxy for small business lending, has been changed from annual reporting to quarterly, and we now have the first quarterly results. While overall C&I loans declined 1.6 percent, loans to small businesses were down at a 7.1 percent annual rate. Small business loan demand is reported to be weak, but a number of banks noted that the quality of the applicants is getting a bit stronger. Weak demand is borne out in the NFIB survey, where the percentage of respondents who reported having credit needs has drifted down to less than 35 percent, compared with a norm in the low-to-mid 40 percent range.

On the supply side, staff research shows that growth in small C&I loans, as well as in small CRE loans, is significantly lower and, for the most part, negative in banks rated 3, 4, and 5, compared with banks rated 1 and 2, even after controlling for bank size. Timing related to government programs is also impacting small business volume. Bankers are rushing to process SBA loans before the 90 percent guarantee and fee waiver programs end on December 31. In contrast, I talked to one banker who is gearing up to exchange TARP funds for the small business capital injection program. He has \$80 million in TARP and an \$800 million small

business loan portfolio. He thinks he can make the \$80 million in additional loans it will take to bring the rate on his capital down to 1 percent, but he knows that he will only get credit for loans made after he enters the program, so he's holding back, waiting for the program rules and definitions.

In consumer lending, strength in auto loans and some final student lending contributed to growth in nonrevolving consumer debt, but credit card debt has fallen for a record 19 consecutive months. According to staff research, contrary to some theories, consumers are not paying down credit cards any faster than normal during an economic downturn. If anything, paydown has been slower than would have been expected. About a third of the drop in balances is due to chargeoffs, and the rest is due to a 10 percent reduction in spending on credit cards, and much lower new account solicitation and application volume.

Overall, mortgage debt is down, but banks seem to be holding more of the origination volume on their balance sheets. One significant player in the mortgage business reported that 2010 originations were a third of levels at the peak, and his expectations for next year were even lower. Most of the origination volume is refinance, and almost all is supported by one government program or another. Refinance volume fell sharply in recent weeks as rates spiked, but even before then only some of the population that can benefit from refinance can qualify for the low stated rates. The reasons they fail, in order of frequency, are: loan-to-value ratios, debt-to-income ratios, and credit scores. Ironically, there's a big group in the middle that can't get a lower rate through refinance because of one of these factors, but nobody will talk to them about a modification because they're still paying their loans. On the positive side, originations and capacity seem to be coming into better balance, which should lead to better pricing, but even

this is being offset by pricing for higher risk—Freddie Mac recently upped delivery fees for all loans with loan-to-value ratios over 70 percent.

Commercial real estate transactions—that is, sales of properties—have picked up recently, although a high proportion is at a nominal loss, indicating distressed sales. Bankers report some slight increase in CRE loan demand, with a few categories actually showing growth, in particular, loans to strong borrowers to purchase distressed properties, and a pickup in the market for multifamily and hospitality properties. Fundamentals are stabilizing along a rocky bottom, with vacancies beginning to plateau in all property types, rental rates still decreasing but at a declining rate, and cap rates improving. In fact, cap rates are the one area of improvement that I hear attributed to LSAP2.

Investor interest is picking up, as insurance companies are back in the game, and REITs are accessing equity and debt markets. And CMBS issuance might get back to \$10 billion this year, and three \$2 billion deals are already in the pipeline for early next year. So, overall, credit conditions continue to improve slowly.

In light of the continuing declines in bank lending, I did think it would be useful to step back and look at the way balance sheets have changed since the crisis began. I asked the staff to pull data on changes in aggregate balance sheets from the second quarter of 2008 to the second quarter of 2010. During that time, reserve balances increased \$972 billion, but total assets grew only a little more than \$200 billion. Over the same time, loans decreased about \$1.1 trillion. But it doesn't look like the reserves crowded out loans. The drop-off in loans was greater than the amount of additional reserves; in addition to the reserves, there were increases in security investments and other assets. Leverage ratios also do not appear to be binding, indicating that capital would allow for more lending. But what appears to be excess capital could be

precautionary, in case losses turn out to be higher than expected or in anticipation of new capital requirements. Alternatively, it could be capital accumulated for dividends or stock buybacks once restrictions are lifted. Deposit growth was also strong over the period; indeed, core deposits rose \$1.2 trillion, indicating plenty of liquidity to fund loan growth. Finally, surveys and anecdotes indicate banks had very weak demand from creditworthy borrowers. Looking at the same data on the sources and uses of funds basis is supportive of the story that bankers have told me over and over: Loan demand is weak, deposits are strong, and the yields on alternative investments aren't high enough to make borrowing to fund them attractive.

Adding together the \$1.1 trillion in loan runoff and the \$1.2 trillion in core deposit growth gave banks collectively \$2.3 trillion in funds, a whopping 17½ percent of total assets. They invested \$1 trillion in reserves, perhaps involuntarily. Borrowings are also down about \$1 trillion, two-thirds in large time deposits and one-third in other borrowings.

It is hard to tell how much of this was borrowing that dried up early in the panic and never returned and how much was a deliberate effort by banks, who didn't see enough profitable asset opportunities to justify the cost of borrowing. The remaining \$300 billion was invested in securities and other assets. However, because reserves now take up 8 percent of bank balance sheets, they have pushed the fraction of total credit to total bank assets down to levels not seen since the early 1980s. I think it will be instructive to monitor the impact of reserves as we add another \$600 billion and as loan demand begins to recover. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. I think we've had a mixed picture since the last meeting, and there have been a lot of those recently. But this is a different kind of mixed picture, one in which the medium-term real economy prospects seem clearly to have improved.

However, at least from my point of view, the downside risks are actually greater now, but they are predominantly financial rather than from within the economy itself.

With respect to the real economy, as many of you have already discussed, things have improved, even since the last FOMC meeting. At that time, I thought we were likely to see only tepid growth for some time, although I carefully and, it turns out, wisely hedged by saying that I thought that the risks to the real economy were on the upside, particularly if there were some sort of unanticipated policy action. I think we've gotten the unanticipated policy action in the form of a fiscal package that exceeded general expectations. They may not be the most efficacious additional stimulus measures in the world, but the payroll tax reduction and the full investment expensing seem to have had a psychological as well as an anticipated real effect. Having said that, though, I don't think that the economy is likely to get carried away by optimism any time soon, and neither should we.

And now I have to say in recognition of yet another Navy win over Army, my next couple of metaphors will be maritime in nature: While the instinct to "stay in port" has receded considerably, it seems to have been replaced by an "ahead one-third" attitude rather than an "all ahead full." I think we see that in several respects. One, the mountains of cash on which major corporations are sitting are probably a testament both to a lack of confidence in the payoff from new investment and to a desire to self-insure against some economic or financial ill winds that might blow across the Atlantic or maybe blow east from some of the states with particular financing problems. Housing, as many of you have pointed out, remains in the doldrums. Even though affordability looks good, demand remains low, probably in part because people are waiting to see if prices will go down yet more, and, presumably, also because the rate on 30-year fixed-rate mortgages is now increasing.

I focus again, as I often do, on the labor market, in substantial part because it seems hard to imagine a sustained or increasingly strong recovery without a significant decrease in unemployment, unless you expect another really big spike in productivity, which I don't think anybody is forecasting. Labor market prospects are obviously mixed—there are more encouraging indications in surveys of employers about future hiring plans, but those have yet to materialize in strong net hiring. One useful labor market indicator reflecting continued caution is the quit rate, a metric that Janet Yellen has mentioned a number of times when we have talked about labor markets. First, I should note, as Janet has in the past, that a fairly high number of quits reflects a healthy labor market, because people have opportunities and they have confidence to leave current jobs. Looking at the JOLTS series, which admittedly has a short life, quits had always exceeded layoffs and discharges by a minimum of about 20 percent on average, and sometimes by as much as 80 or 90 percent. That changed in the fall of 2008 when quits dropped precipitously. Late that year, as layoffs rose especially steeply, the two lines crossed on the JOLTS graph for the first time. And then, for nearly a year, layoffs exceeded quits by about 20 percent, and sometimes more, before quits finally stabilized and layoffs declined in the latter part of last year. Since then, layoffs have been near the levels seen in pre-crisis years. Quits, on the other hand, have only inched up since that time—they're still nearly 20 percent below previous levels and, while the quits rate has now edged ahead of layoffs, it has bounced back and forth a little bit over the last six months. Until the gap grows a good deal more, it will be hard to conclude that the labor market is returning to some semblance of normality.

With respect to the financial risks, I think Bill covered those well. I would just add a couple of things about the euro zone. I think, first, we've seen what happens when you try to do crisis management and structural reforms at the same time—you massively confuse investors and

markets, and the Europeans are still paying the price for that. Second, a number of you have mentioned the supposed Spanish firewall. I, for one, don't see any evidence that anybody is building a firewall. At this point, it just seems to be a forest fire effort which is spread across all of the periphery. If they really mean to have Spain being a firewall, one would hope to see a more concentrated Spain-specific set of measures, internally and externally provided.

In sum, I will end where I began by saying that, oddly in a sense, the real economy here in the United States looks still to be improving only modestly, but with more traction than before. But, somewhat counterintuitively, the downside risks are now greater, in the sense that they are external, which is to say, I think, in financial markets. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Raskin.

MS. RASKIN. Thank you, Mr. Chairman. I believe the state of the recovery is more promising than it was at the November FOMC meeting, but I see considerable continuing downside risks in terms of both price stability and unemployment. Information we have received for this meeting suggests considerable reasons for optimism. In particular, private domestic final purchases are looking stronger, business purchases of equipment and software are increasing, and wholesale inventories and merchandise trade have been marked up. Since the last meeting, equity prices are higher, the yield curve is steeper, and risk spreads have narrowed. I read these financial indicators as implying that financial markets could be recovering from their nervous conditions of this spring. Given these stronger indicators and the additional confidence provided by our latest program of large-scale asset purchases and by the likelihood of more fiscal stimulus, I think there are some reasons for cautious optimism that the recovery is on a path to becoming stronger.

There remain, however, significant downside risks. Specifically, in addition to the continued weak housing market, problems in Europe, and weaker banks, the recent decrease in measures of core inflation, I believe, bears continued attention. While I don't think that we're in serious danger of deflation, I hope that the continuing decline in core inflation does not eventually affect inflation expectations and, thereby, lower wages as well as raise real interest rates. While break-even inflation rates have been stable since our last meeting, professional forecasters, as measured by the Livingston survey, appear to be revising their forecasts downwards, and the level of economic slack continues to be substantial. If inflation continues to fall, becoming difficult to reverse, inflationary expectations could become unanchored, and I worry that rising real interest rates could offset the added monetary and fiscal expansion. Thank you.

CHAIRMAN BERNANKE. Thank you very much. And thanks, again, to everyone for your thoughtful comments. Let me try to give, as I often do, a quick summary, and then I'll add just a few extra thoughts. Relative to November, the data suggest some improvement in the near-term outlook. A moderate and apparently more sustainable recovery is continuing and may accelerate in 2011 and 2012. Indicators of household spending and production have strengthened. The tone of the labor market is somewhat better, notwithstanding the weak employment report for November. However, the news on housing has been disappointing. The fiscal compromise, if enacted, should add to policy stimulus in 2011.

In the household sector, consumer confidence and spending, including discretionary spending, have been stronger, and expectations for holiday sales are reasonably upbeat. A disproportionate amount of the strength in spending may be occurring among high-end households. Purchases of durable goods are up. The labor market is improving. Still, the pace

of hiring remains slow, and there is considerable reliance on part-time and temporary workers, and quits remain low. Deleveraging in the household sector is continuing, but lower house prices are reducing household wealth and could be a negative for spending as well as for bank balance sheets and credit extension. Nearly 25 percent of households are underwater on their mortgages, increasing the risk of defaults and foreclosures, and, consequently, further declines in house prices.

Employers are more optimistic about sales and growth but still remain, on the whole, somewhat cautious about hiring and investment, although some around the table reported improvements on that dimension as well. Uncertainty about the durability of the recovery and about policy, including health care policy, remains an issue. Manufacturing output is expanding, and exports are stronger. As usual, some industries are doing relatively well, including energy, agriculture, and transportation excluding rail. Construction remains very weak, but high-tech is showing signs of recovery.

Financial conditions during the intermeeting period have been mixed and include some simmering risks. Importantly, there has been a significant backup in longer-term rates arising from a number of factors. However, this development is not inconsistent with our asset purchases having been effective in the August–November period. European sovereign banking problems have created significant uncertainties, and these problems could be transmitted to the United States via money market funds, domestic banks, or changes in risk aversion. Burden-sharing remains the persistent issue in Europe, which argues against early resolution of the issue. Bank lending and loan demand, especially by small businesses, generally remain weak, though there are some exceptions, including nonrevolving consumer credit. Mortgage refinancing has been limited by tight terms and conditions. Merger and acquisition activity is up, deposit growth

is strong, but many banks remain low-rated and face challenges in commercial real estate and elsewhere. Rising agricultural land prices may indicate broader concerns about asset valuations. The fiscal situation, at the federal and the state and local levels, may ultimately pose significant financial risks, including near-term issues with municipal bonds.

Finally, core inflation measures continue to drift down with the slowdown in price increases quite well spread across categories of goods and services and across different inflation measures. Firms do not perceive much pricing power. Increased energy and commodity costs are substantially offset by lower labor costs. Inflation breakeven rates have risen in recent months, but private sector forecasts and surveys suggest reasonable underlying stability and inflation expectations at levels close to the Committee's objectives. Participants' views on the outlook for inflation and inflation risks for the medium term remain somewhat diverse. Some expect inflation to pick up gradually as the economy strengthens, while others still see downside risks. Difficulties in measuring slack and in beating the random walk forecast make inflation predictions difficult. Overall, though, deflation risk seems to have receded somewhat since the summer.

Comments? [No response] Again, thank you for the very useful discussion, which I think was very balanced and very appropriate. Let me add just a few thoughts. As the Vice Chairman pointed out, on a headline basis we are a little further from our objectives, in the sense that unemployment is higher and core inflation, at least, is lower. That being said, I agree with the thrust of the comments around the table that the intermeeting data were moderately positive for the near-term outlook. For example, in the labor market, even though we saw a weak job growth number for November, we've also seen declines in UI claims, increases in vacancies and hiring plans, reductions in layoffs and discharges, increased work weeks, some decline in long-

term unemployment, better surveys, and so on. So there are a number and range of indicators suggesting a somewhat stronger and more upbeat situation in labor markets. In sum, then, we've had some improvement in the near-term outlook.

As we take comfort from that and feel more comfortable with our forecast, we should at the same time keep in mind what a deep hole we're in. The unemployment rate is, after all, 9.8 percent, which is 0.3 percentage point higher than it was in June 2009 when the recession officially ended. A remarkable statistic, which I've mentioned in these meetings before, is the magnitude of the decline in total hours worked, which is a measure that many business cycle theorists rely on. From peak to trough, total hours worked in this recession dropped 7.3 percent, which is about two and a half times the decline in the 1981–1982 recession. That number shows that labor input contracted at more and more margins than in previous recessions. We have so far recovered less than a quarter of that loss.

Another indicator of the tremendous decline in labor input is the employment-to-population ratio, which has fallen from 63 percent to 58 percent of the relevant population, about a 7 percent decline—not percentage points but percent. And that low point was in October of 2010. We have not made any progress in that particular statistic. Participation rates, in particular, and employment-to-population ratios are particularly discouraging among younger and more disadvantaged groups. For example, young people between the ages of 16 and 24, during the strong growth of the late 1990s, had about a 60 percent employment-to-population ratio, and now it's 45 percent; the employment-to-population ratio for teenagers is now 27 percent, a very significant decline from earlier numbers.

So, there are encouraging signs for which we should be grateful. That gives me more confidence that the recovery is proceeding, notwithstanding some of the downside risks,

particularly financial, that have been noted. But, again, we are starting from a very deep hole, and no one around the table that I heard is suggesting that we'll be seeing rapid declines in unemployment. Rather, our hope is that economic growth will be sufficient to begin, at least, to set unemployment in the right direction.

All that being said, I think that we still have risks in both directions on the economic growth front. I'm sure many of you around the table were here in the middle of 2003 when, after nearly two years of almost no progress from the 2001 recession, practically out of the blue in the third quarter of 2003 we had a 7 percent real growth rate followed by almost a 4 percent growth rate in the fourth quarter. The factors leading up to that were increasing confidence, sustained monetary policy support, and a sense among producers that they were running out of room to increase productivity gains. Suddenly, that all came together, and we began to see some significant progress, although hiring did lag economic growth by several quarters. Therefore, it's entirely possible that we will see some stronger quarters going forward. However, we still remain close to the break-even rate, which I think of as the escape velocity of 2½ to 3 percent or so. Given the risks that still exist in the banking sector in Europe and so on, we can't rule out the possibility that we'll fall back and suffer a further slowdown in growth.

On the inflation side, I don't have much to add. I think inflation remains quite well contained, and, indeed, if anything, the risks are still to the downside. Our LSAP program has been successful in raising inflation expectations and moderating the fear of deflation, which is a good thing. I think that's one of the reasons that confidence is better. The one issue that we had been concerned about when we discussed LSAPs last time was commodity prices, and commodity prices are up somewhat. But I have two observations on that. The first is that high commodity prices have not been associated with a dollar decline—they mostly reflect relative

price changes and changes in real conditions. Evidence for that, the second observation, is that futures prices for oil and many other commodities have gone into backwardation, meaning that the expectation is that prices will be flat or down in the next year or so.

To summarize, then, the broad contours of the outlook have not changed very much. Although I think we have somewhat more confidence in near-term growth, we are starting from a very deep hole, and we remain far from our objectives in terms of policy.

I'd like to add a couple of comments about the assessment of the LSAPs so far. I agree with Governor Warsh that judgments at this point are very premature, and it will be quite a bit of time before we can say anything very definitive. Nonetheless, I agree with President Bullard that the best assessment of the evolution of financial conditions between the end of August and our last meeting has to involve a certain amount of monetary stimulus, and that includes the behavior of real rates, the dollar, the stock market, yields, spreads, etc. Again, I think it's reasonable to attribute some of that to the markets' anticipation of our actions, and, in turn, to their anticipation of some improvement in the outlook due to those changes in policy support.

That being said, I would disagree with those who might suggest that we are in an excessively accommodative position. There are many different ways to measure policy accommodation, and, as Milton Friedman taught us, low nominal interest rates are only one indicator of policy accommodation. We have, of course, tried to do policy simulations, using policy rules, and the like. As President Kocherlakota pointed out, those depend on measured gaps, which are difficult to measure, so they have to be taken with a grain of salt. However, our optimal policy simulation still suggests that we're considerably above where optimal policy would be in the absence of the zero bound. A simpler indicator—the real short rate—has risen by about a point and a half since December 2008, as we've been pinned at zero and as inflation

has come down by about a point and a half. An indicator that I take to be important is nominal GDP growth—it was less than 1 percent in 2009 and is about 4 percent this year, and the Tealbook predicts it to be 4.7 percent next year. It is very hard for me to imagine that we can have both a strong recovery and an inflation risk at the same time that nominal GDP growth is so constrained. I put less weight on monetary aggregates. I think they are somewhat unreliable, given the changes in velocity. Still, M2 growth in 2010 is predicted to be about 3 percent, and for next year about 1½ percent according to the Tealbook. And then, of course, again, we see what is happening to inflation and inflation expectations.

Therefore, broadly speaking, given the depth of the recession and given how far we have to go, I think the evidence at least moderately favors the view that policy is not too accommodative, but that, to the extent it is accommodative, it has been somewhat successful in advancing our objectives.

When we discussed this policy last time, I promised we would continue to monitor the side effects—I know that has been a particular concern of President Hoenig. I think we need to keep doing that. I didn't mention that, as usual, we circulated the financial stability memos prior to the meeting, and we have been having regular meetings and discussions of financial stability. Notwithstanding the point about land prices, there do not seem to be, in my judgment, any large growing imbalances on the financial stability side, but that's obviously something we have to keep looking at. Inflation expectations remain about where they should be, and the dollar has not shown any indication of sharp decline. Again, I feel reasonably comfortable with the action that we took. Notwithstanding the improvement in the outlook, I think that it was the right decision and that it remains appropriate given the depth of the decline in output and hours and the uncertainties that we still face going forward.

Let me stop there and turn to Bill English, who will introduce the policy go-round.

MR. ENGLISH.² Thank you, Mr. Chairman. I'll be referring to the package labeled "Material for FOMC Briefing on Monetary Policy Alternatives." The package includes the four draft policy statements and the associated draft directives. The changes to the statements that were distributed over the weekend have been incorporated into this package; so the language marked in red now denotes changes relative to the November statement.

We have provided you with three alternative statements, A through C, that are similar in structure to the statement issued in November but that vary with regard to the size of the intended increase in the Federal Reserve's securities holdings—\$600 billion, as in November, under alternative B, \$800 billion under alternative A, and \$400 billion under alternative C. The staff estimates that the \$200 billion increment employed between these alternatives would likely have macroeconomic effects broadly similar to those associated with a 25 basis point change in the federal funds rate target if the target rate were not at its effective lower bound. The final statement, alternative D, is quite different; in that case, the Committee would immediately cease adding to its securities holdings and would begin laying the groundwork for an exit from the current extraordinary degree of policy accommodation.

Turning first to alternative B, on page 3, the Committee may think that it is appropriate to continue with the asset purchase program announced in November in order to strengthen the recovery and move inflation back toward levels that it sees as consistent with its dual mandate. Such a decision might reflect, in part, a desire to show a steady hand on policy and to await more information on economic and financial developments before making an adjustment. In addition, choice of this alternative would presumably continue to reflect three judgments: First, despite the somewhat better economic data and the proposed fiscal agreement, that the economic recovery is not likely to be sufficiently strong to bring down unemployment at a satisfactory rate; second, that additional purchases of longer-term Treasury securities will help support the recovery and move the unemployment and inflation rates toward the Committee's objectives; and third, that the costs of additional purchases are not sufficient to outweigh those benefits.

Under this alternative, the changes from the November statement are relatively minor. In the first paragraph, they reflect the somewhat stronger growth now seen for the second half of this year, the ongoing weakness in the housing sector, and the continued downtrend in inflation. In the third paragraph, the changes that we distributed Sunday were intended to make clear that the policy decision at this meeting was a routine update and restatement of the policy adopted in November. Other than that, the statement is virtually unchanged; it retains the language about "disappointingly slow" progress toward the Committee's objectives, how "the

² The materials used by Mr. English are appended to this transcript (appendix 2).

Committee will regularly review” the asset purchase program, and the anticipation that “exceptionally low” funds rates will be appropriate for an “extended period.”

Market participants generally expect today’s statement to update the Committee’s views on the economic outlook and to make no change to the asset purchase program announced in November. Thus, a statement along the lines of alternative B would probably have little effect on asset prices.

The Committee may be concerned, however, that the run-up in longer-term interest rates over the intermeeting period could damp household and business spending significantly, and that the proposed fiscal agreement is likely to have only a modest and temporary effect on economic activity. If so, members might be inclined to increase the size of the Federal Reserve’s securities holdings by a total of \$800 billion—\$200 billion more than announced in November, as in alternative A, page 2. Even if members think that the economic outlook improved noticeably over the period, they may still anticipate that unemployment will decline only very gradually. Moreover, they may be concerned that underlying inflation has continued to trend downward, heightening the risk that adverse shocks could lead to deflation and a protracted period of extremely poor economic performance.

The description of the economy under alternative A would be quite similar to that under alternative B. But the second paragraph would note that measures of underlying inflation are “low,” not just “somewhat low,” and that progress towards the Committee’s objectives “remains disappointingly slow.” The third paragraph would note the larger increase in the size of the SOMA portfolio intended under this alternative. And the fourth paragraph would provide more explicit forward guidance about the federal funds rate, indicating that the Committee anticipates economic conditions are likely to warrant exceptionally low levels for the federal funds rate at least through mid-2012. Given the rise in market-based measures of the expected path for the federal funds rate and the apparent increase in uncertainty about future short-term interest rates, the firmer guidance included in alternative A could be seen as an effort to better align the markets’ policy expectations with those of the Committee. Of course, this change in the forward guidance could be combined with one of the other alternatives as well.

A decision at this meeting to increase further the intended size of the Federal Reserve’s securities holdings would come as a surprise to market participants. Combined with the strengthened forward guidance in paragraph 4, this announcement would promote a downward shift in the expected path of the federal funds rate and a reduction in longer-term interest rates. Stock prices would likely rise, and the foreign exchange value of the dollar would likely decline. These effects could be sizable, as market participants would likely read this decision as indicating a greater willingness on the part of the Committee to use asset purchases to provide stimulus than had been anticipated.

The Committee may have read the incoming data over the intermeeting period, as well as the proposed fiscal agreement, as suggesting a significantly stronger outlook for economic growth and employment and a reduced risk of further declines in inflation. If so, members may want to reduce the intended size of the SOMA portfolio, as in alternative C, page 4. Indeed, if, in November, members had thought that the decision to add \$600 billion was a close call, then even a modest improvement in the outlook could lead the Committee to mark down its assessment of the optimal size of the program at this meeting. Moreover, a slower pace of purchases could be seen as attractive because it would give the Committee a longer period during which it could adjust the size of the program in response to incoming information on economic and financial conditions before the purchase program is completed.

A decision to slow the pace and reduce the intended size of the Committee's securities purchases at this meeting would come as a surprise to market participants. The result would likely be a further increase in longer-term interest rates, lower stock prices, and an increase in the foreign exchange value of the dollar. These movements could well be sizable, given the sensitivity that the market has shown over the intermeeting period to prospects for asset purchases.

Finally, the Committee may feel that, with the economic recovery continuing, and perhaps even strengthening, further monetary stimulus is likely to have costs that outweigh its benefits. In that case, members might immediately stop adding to the Federal Reserve's securities portfolio and signal a less accommodative policy path in the future, as in alternative D, page 5. That approach could seem particularly appropriate if members judged that much of the current elevated level of unemployment reflects unavoidable inertia in the reallocation of labor across sectors and regions, and so cannot be effectively addressed by additional monetary stimulus. In addition, some members may also be concerned that continued extraordinary policy accommodation likely will lead to the development of costly macroeconomic or financial imbalances.

The first paragraph of the statement for alternative D notes that the recovery is proceeding and that the Committee expects a gradual return to higher levels of resource utilization in a context of price stability. The second paragraph states that the Committee decided to discontinue the asset purchase program announced in November and suggests that the reinvestment policy could be changed soon as well. Paragraph three revises the forward guidance for the federal funds rate to indicate an earlier increase in short-term interest rates, and the final paragraph uses more neutral language to describe the Committee's possible actions going forward.

An announcement along the lines of alternative D would come as a very substantial surprise to market participants. Interest rates would rise significantly across the yield curve, equity prices would fall sharply, and the dollar would appreciate.

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

CHAIRMAN BERNANKE. Thank you. Are there questions for Bill? President Lockhart.

MR. LOCKHART. Bill, looking at alternative A, is it your sense—and I don't want to put words in your mouth—that the market might see this as a sequence of steps?

MR. ENGLISH. I'm not sure they'd see it as a sequence of steps, but I think they would see it as certainly opening the door to additional increases later on.

CHAIRMAN BERNANKE. Other questions? [No response] Seeing none, we'll start the second go-round. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. I support alternative B. With our announcement of the large-scale asset purchase last month, and with some additional fiscal stimulus likely to be approved before the end of the year, this is probably an appropriate time to assess the impact of these actions and to gauge whether the slow recovery embedded in most of our forecasts unfolds as expected. With little change to our forecast, which envisions substantial misses on both elements of our mandate through 2012 and beyond, it is difficult to imagine why we would not purchase all \$600 billion of government securities. Moreover, I remain concerned that disinflationary pressures may not abate quickly given the significant excess capacity in the economy and given that the recovery, such as we have experienced it to date, remains quite fragile. With core inflation estimates currently getting close to estimates of the inflation bias, I can easily envision circumstances in which we would want to expand our large-scale asset purchases next year. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I, too, support alternative B. I believe some patience in letting the effects of the new LSAP materialize is warranted. I would also say that in my view the reversal of the summer's downward trend in longer-term inflation expectations represents an early sign of the success of our current policy course.

Though I don't feel any adjustment of policy is needed at this juncture, and though I am comfortable with the statement language as presented, I would favor in the coming meetings a more thorough discussion of the broad policy framework the Committee believes it has adopted and how it should be conveyed in the statements going forward. In that regard, I would like to comment for a second in more detail about the language in alternatives A and C. Like others on the Committee, I think the policy concern of the moment is communication. The reason I asked Bill English the question about the \$200 billion change signaling potentially a sequence of adjustments on a more open-ended path is that it strikes me that A and C could be interpreted as a first step in a sequence. In that light, the language seems to signal a move toward an approach to policy that resembles the funds rate targeting approach when the zero lower bound did not pertain. In alternative A, for example, it has already been mentioned that an additional \$200 billion might be viewed as roughly equivalent to a 25 basis point cut in the fed funds rate.

In my mind, this asset purchase analogue to funds rate targeting adds two characteristics that the Committee might consider beginning to convey in statements. First, a sequence of similar moves is likely unless economic conditions change in some significant way. And, second, the total value to which the sequence of moves accumulates is left unstated, because that quantity is conditional on economic conditions. If this is not the policy framework we intend to communicate, then the language needs to be carefully constructed to avoid any confusion about our policy strategy. So I'd like to advocate that, whatever action we take next on the asset

purchase program, we convey it choosing language that more openly reflects a deliberate Committee choice about our policymaking framework for the foreseeable future. I hope, therefore, that at the next meeting we might devote a little time to discussion of our policy framework options and the content of communications that would convey them and support the effectiveness of the chosen approach. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Lockhart, by “framework” are you thinking about the broader issues we talked about in the teleconference, like an inflation target? Or do you have a more narrow idea?

MR. LOCKHART. I have, in some respects, a more narrow idea. I think some of the debate over time has been about a discretionary versus rules-based approach, so it’s that tension that I have in mind. To explain what I mean, I describe our approach today as involving meeting-by-meeting reviews that result in decisions around a fairly large asset purchase program that is closed-ended, in the sense that a final cumulative target for purchases is explicitly stated. In contrast, it has been suggested before that the Committee adopt an incremental approach with the cumulative purchase target left open. So that’s what I am trying to convey.

CHAIRMAN BERNANKE. I understand. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. I can accept “no change” in policy at this time as reflected in alternative B. In my remarks before this Committee six weeks ago, I expressed reservations about embarking on a second round of long-term asset purchases. A significant concern was, and it continues to be, in my mind, that the benefit of further LSAPs is likely to be too small to justify the cost and the risk associated with further expansion of the size of our balance sheet. While I still hold that view, it would be difficult to reverse course at this

juncture. However, I do take seriously the Committee's promise to reevaluate our policy on a regular basis and to adjust it as appropriate in the coming months.

I would like to take this opportunity to discuss briefly how I think about evaluating the LSAP program going forward. First and foremost, I would like to reemphasize that there are significant economic and political risks that stem from the inflated size of our SOMA balance sheet. The economic risk is that we may find it harder to control inflationary expectations when the economy goes into full recovery mode and we have possibly upward of \$1.5 to \$2 trillion of excess reserves sloshing around in the banking system. Our reserve-draining tools are untested for large operations, and I'm concerned that they may not be as effective as we currently anticipate. I continue to believe that asset sales will need to play a significant role in our exit, but I'm concerned that political criticisms will make both sales and increases in interest rates difficult to execute in a timely fashion, thus increasing the risks of falling behind the curve. Moreover, by increasing the amount of excess reserves by about 50 percent, we increase the risks of falling behind the curve.

To be clear about what political criticisms I'm worried about, consider the consequence of raising interest on reserves. With \$1.5 trillion of excess reserves, a 100 basis point increase in the IOER rate, which could easily occur over the course of a year sometime in the future, represents a transfer of about \$15 billion from the U.S. Treasury to the banking system. At a time when the government faces large deficits and the Fed is already vulnerable to intense criticism regarding its treatment of the financial sector, I'm concerned that this redistribution will lead to accusations that the Fed is continuing taxpayer bailouts of our largest banks. Such criticism, I fear, will find further ground because the volume of excess reserves is highly skewed towards a few of the largest institutions. This potentially politically unpopular redistribution will

also happen as we use our reserve management tools when we have to pay banks more in IOER to sequester the reserves using reverse repos or term deposits. Of course, this does not mean that we should back away from using these tools, and I believe we should use them when the time comes, but I think we must be cognizant of the potential cost, namely, the risk to the institution and our independence of managing such an overly large balance sheet going forward.

The key challenge, therefore, is not whether we can raise interest rates in draining reserves, but whether we'll be willing to do so at the appropriate time. Will we be reluctant to act out of fear of criticisms that might endanger our independence? Of course, that's not the language we'll use, but we'll say we choose to delay because of headwinds, a fragile economy, and this will lead to a prolonged "wait and see" attitude by the Committee and its approach to policies, and we will risk acting too late. If we do fall behind the curve, we may find ourselves needing to reduce the size of our balance sheet very rapidly to contain inflationary expectations. This may necessitate a large increase in real interest rates with potentially negative effects on real activity and rising inflation. At the end of the day, we will have contributed to greater, not less, instability in the economy.

Given these concerns, I strongly believe that the economic forecast remains similar to what the December Tealbook looks like. Our goal should be to implement orderly reductions in the sizes of our balance sheets sooner rather than later. Given our current forecast, this makes me less inclined to support policy accommodations that involve adding to our already swollen balance sheet and more inclined to support recommendations that involve reducing the pace of LSAPs and ultimately resulting in the sale of assets.

That said, I wish to reiterate my remarks from six weeks ago regarding the best way to manage our LSAP program. First, we need to be clear about the expected transmission

mechanisms with these purchases. In my view, the main impact we seek is on inflationary expectations and real interest rates. Yet our communication does not distinguish between real and nominal interest rates in the long-term Treasuries, and we continue to tie the effectiveness of LSAP to near-term paths and the unemployment rate. We know very little about how any given LSAP purchases affect demand and supply conditions in the labor market. By not being clear about what we expect LSAP to accomplish, I think we risk damaging our credibility. Second, we need to convey what we're conditioning the LSAP policy on. I worry that the tone and emphasis of our language and our communications more generally may ultimately back us into a corner. We seem to be increasingly stressing the level of the unemployment rate as the most important factor determining policy.

If we shift our focus from the level of unemployment to changes in it, that would be an improvement. But we still seem to be suddenly deemphasizing real economic growth and inflation or inflation expectations as important conditioning variables for policy. This shift, I believe, is subtle but potentially dangerous. It is a mistake because it risks creating the expectation that the Committee will delay tightening until the unemployment rate achieves some desirable level. That would make it even more difficult for us to act in a timely manner.

So I'll be focusing going forward on improving economic growth rates of real GDP as well as changes in the unemployment rate, not the levels of these variables. Many of us around this table have noted previously that we will have to begin to withdraw accommodation well before unemployment reaches acceptable levels or the perceived output gaps are closed. Let's not let subtle changes in our language make that task any more difficult than it will already be.

Finally, I would strongly advocate that we revisit our earlier discussions regarding exit strategies. If fully carried out, LSAP2 will increase reserves by about 50 percent, which is a

pretty big increase. I think we need to know before it's time to begin the exit if these additional reserves will have any material consequence for how fast we will need to sell, or will be able to sell, assets or raise the funds rates and what we anticipate the consequences of those actions will be. We had a very fruitful discussion about this earlier this year, and I think revisiting that discussion in light of the expanded balance sheet could be a useful exercise. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I still oppose the asset purchase program we decided on at the last meeting. So I personally would favor scaling the program back as in alternative C. However, I can understand why those who supported the asset purchase program at our November meeting would be reluctant to back off right now. The economic outlook has improved somewhat since the last meeting, but probably not enough to convince many of you to switch camps. So I won't bother trying to persuade you to do so.

What I would like to do is to make some comments in anticipation of discussions we may face at upcoming meetings in the new year in light of what's happened in the last couple of weeks to the long rate, and this is by way commenting on essentially our reaction function. An intermediate objective of our asset purchases was to reduce longer-term rates. So the recent increase in those rates presents us with something of a problem, which we may face fairly often going forward, namely, how should we react to increases in long rates. The answer depends on just why long rates go up, obviously. As a general matter, if long rates are driven up by a rise in inflation expectations to levels above those consistent with price stability, I think we would all agree as a matter of principle that monetary policy should shift to a less accommodative stance. In the present case, obviously, the rise in nominal Treasury yields since the November FOMC

meeting has been virtually all real. Inflation expectations haven't risen much over that time frame, although they did rise between September and November.

If long rates are driven up instead by a significant strengthening in the economic outlook, we should applaud that strength and simply point out that higher expected growth requires higher real interest rates. If we got enough strengthening, that would indicate that monetary stimulus should be scaled back, but, in any case, I don't see a reason why additional economic strength would warrant additional stimulus. As I said before, I think the strengthening in the outlook has been modest so far. So it is unlikely to have been the only reason for the run-up in yields.

A third possibility is a little more disturbing, and it is that long rates are driven up by increasing fears about long-run fiscal balance, in other words, that future debt issues are expected to crowd out private investment and drive up real rates. The rate response to the announcement of the tax deal certainly suggests that anticipated fiscal implications could have contributed to the recent rate increases. In this case it would be clearly inappropriate for us to try to counteract the increase in rates with an expansion in our purchase plans or by avoiding a reduction in our purchase plans that we would otherwise have been inclined to make.

Now, I believe we would want to be clear that we will not alter policy to accommodate a deficit-driven increase in Treasury rates. I think there are dangers in the other direction, as well. In the perhaps unlikely event that the Congress and the Administration move forward next year to substantially reduce the path of future federal deficits, we may be pressured to keep federal financing costs down. Moderate long-term interest rates, after all, are one of our three supposed mandates. Obviously, we would want to resist that, but we could find ourselves being perceived as thwarting the Congress's attempts to resolve the nation's fiscal problems.

I want to point out that the broader point is essentially the one that Eric Leeper was making at the Jackson Hole conference. Eric and Chris Sims and many others have been making the same point for many, many years, and it's about the danger of letting monetary policy slide into a stance of passively accommodating fiscal policy, which, in our current case, is at significant risk of being dysfunctional. Eric Leeper argued that even before we switch to a sort of passive mode, expectations that such a switch might occur in the near future or even several years down the road could well have inflationary consequences today. Indeed, the story of monetary policy in the late 1960s, a period when inflation drifted upward unchecked, is largely about monetary policy becoming subservient to fiscal policy. I think this could be a real problem for us soon if the public perception of a politically weakened Fed leads markets to question our willingness to act independently of fiscal policy. I know these dangers are well understood by this Committee, but I think it's going to be useful to try and anticipate how we would respond publicly should that challenge face us in the future. Thank you very much, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you for the comment. I think I'm being only partly facetious if I reply to you and President Plosser that if our goal is to curry political favor, we're not doing a very damned good job of it. [Laughter] President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I have argued that the financial market effects of asset purchases were substantial prior to the November meeting. I expect that the effects on real variables, such as consumption and investment, will follow with a lag of one-half to one year. This would be similar to the real effects of monetary policy easing estimated, for instance, by Frank Smets and Raf Wouters, or possibly Christiano, Eichenbaum, and Evans. The 2011 outlook is indeed improving, but it's too early to come to any policy conclusion based on that. Inflation expectations have increased, according to the five-year TIPS measures, as many

have discussed in the run-up to the November meeting, and remain higher today than they were during the summer. One thing about the five-year measure is that I think we should be able to hit our implicit inflation target over a period as long as five years—that has usually been a goal of the Committee, so I think that's a reasonable expectation.

Still, actual core inflation measures are low, as many have pointed out—measured from one year ago, nearly all inflation measures are below 1 percent. This is a concern to me—I would like to see this disinflation trend turn around. Until it does, I would advise remaining with the current course of asset purchases. Therefore, for today I support alternative B. I suggest one minor change. I would omit, as I have argued before, explicit reference to the \$600 billion figure. We could interpret the \$600 billion as a form of forward guidance based on current forecasts of the Committee, but I think it's an inferior way to give forward guidance and unnecessary. I think that a big figure like that lumps us in with other types of stimulus programs that have been enacted over the last couple of years, when, in fact, this is ordinary monetary policy, the purchase and sale of Treasury securities. So instead I would simply state that the pace of purchases would be at \$75 billion per month and that we are likely to continue this pace of purchases through the second quarter of 2011, and then I would let the financial markets do the math—they're supposedly good at doing the math.

In a way, that would be no real change, but it would have, to me anyway, some advantages going forward. We can and probably will adjust the program on the dimension of the pace of purchases, that is, we might slow or increase the pace of purchases, and we might adjust the program along the dimension of its length, so that we could say, for example, that we're going to continue through the third quarter or only through April or something like that. So those are the two dimensions we're likely to change, and we can do so without putting the big

number in the statement. I think that might be a bit helpful at this juncture. I think it would also help to reinforce that the program is, indeed, adjustable and state-contingent and, above all, that monetary policy is a continuous process, not a series of temporary actions. I think it would also help to eliminate the talk of QE3 and QE4 that is reverberating around financial markets and instead get markets to think in terms of a policy rule for the Committee. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. As I listened to the discussions today during the first go-round, it does appear that many have revised up their forecast, as I have. I also expect inflation, as others have said, to start low, but I do expect it to increase slowly over time. I join those who would like to see immediate stronger growth and lower unemployment. I continue to judge that additional monetary stimulus carries more long-term risk than short-term advantage to our economy.

The economy is undergoing a major and necessary rebalancing that includes the deleveraging of consumers, financial institutions, and state and local governments. The process will take time, and shortcuts are costly. With the amount of stimulus in place and the extended size of our combined balance sheets, the effect on expectations, confidence, and asset prices will be significant once we initiate or hint at initiating an exit involving even the most modest steps from our current highly, in my opinion, accommodative policy. Thus, the process of exit from an accommodative policy will be a major challenge, far more so than we're willing to acknowledge today, in my opinion. It starts from the very fact that we are easing into an improving economy because unemployment is too high. Then there would be the obvious concern that, as we start to raise interest rates, the initial downward effect on asset prices and

financial activity will be outsized. The markets will despair. As a result, I suspect pressure for the Committee to delay its exit from current policy will be significant.

I suspect the challenge will only increase for the Committee going forward from here. I'm already hearing today that we can't change because we've set this path for ourselves. The funds rate is near zero. Our balance sheet is growing, approaching \$3 trillion, and excess reserves are approaching \$1.5 trillion. Accordingly, the longer the Committee delays in preparing for exit, the greater the difficulty of doing so in a timely manner, increasing systematically the likelihood that it will inadvertently invite future imbalances in inflation impulses because of the delay.

Mr. Chairman, you mentioned 2003, and I remember it well. We talked a lot about not wanting a repeat of Japan, being afraid of deflation and not having enough inflation. So the Committee delayed, held back. Unemployment was too high at that time, at 6½ percent. I worry about our focus on unemployment even though I'm as concerned about it as you are.

And when we exit, we'll require time, I realize. Nonetheless, we should begin that long process now. We first should adjust talk of the need for further monetary stimulus. We should indicate that sufficient stimulus is in place to attain over time long-run potential growth for the economy. It won't come quickly, but it will come. We also need to reopen our dialogue about an exit strategy so that we don't shock the market as we move forward from here.

Of the options presented, I would take some combination of C and D, but I won't go into that, because I know that's not on the table today. But I will, in summary, say that I believe that our current highly accommodative monetary policy is inconsistent with our long-run mandate in an economy that is recovering and shifting from transitory, I think, to sustained sources of growth and picking up some speed. To maintain such a highly accommodative policy in this

economic environment increases the risk of imbalances developing in the longer term and the risk of longer-term inflation expectations necessarily rising over time.

We need to begin shifting our language to regain policy flexibility and avoid locking ourselves deeper into a long-term policy position that is becoming in my opinion, of course, increasingly difficult to reverse in a timely fashion with each additional step over the next six months. Thank you.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. I support alternative B. Nothing has changed sufficiently since our November meeting to suggest any other course of action. Inflation is too far below our mandate and resource slack remains very large, and I don't see either of these conditions changing very soon. Risk aversion is still holding back spending. Businesses continue to accumulate cash rather than undertake expansionary investment activities or increase staffing. Households remain cautious in their spending plans and are further reducing debt.

Lower real interest rates would reduce incentives to save and expand demand. However, we can't get there now through lower nominal rates because of the zero lower bound. We continue to be mired in what I refer to as a liquidity trap. Reducing real rates now would require inflation moving up closer to our mandate levels. It is disappointing that longer-term Treasury rates have risen so much since we last met, but it seems clear that these increases reflect nonmonetary events as well as reduced expectations for monetary accommodation. Others have spoken on this, so I'll let those comments stand. It seems clear that reducing our intended Treasury purchases now would only add to these negative influences in an unhelpful manner. So I do support alternative B.

With the risks that we face and the magnitude of our shortfalls, it will be important to continue evaluating our current programs and policies. So I certainly agree with other comments on this matter. As I look at 2011, I see we have several tools that could provide additional monetary accommodation if that proved to be necessary, and we are using two of them now. I think the most powerful one is the FOMC's commitment to keep short-term interest rates low for an "extended period" of time. Stating that commitment more explicitly with a likely calendar date could be a helpful boost, if that were necessary, as in alternative A. A second tool is our larger balance sheet. It also signals a firm commitment to low interest rates as necessary relative to our dual mandate objectives. We can add a third tool: Strengthening our commitment to an explicit inflation objective would be an additional instrument to signal the future path of policy. President Plosser's concerns about too much emphasis on the unemployment rate could be addressed in part by stating our inflation objective more explicitly. I think it would be easier for us to navigate how much weight we're putting on those two channels. We would still disagree, perhaps, on where we stand, but I think that that would be, on balance, beneficial. And fourth, it would be helpful to be willing to entertain having inflation at times come in slightly above our mandate. This would be a natural feature of an unbiased policy based on symmetric losses about our inflation objective.

I personally worry a bit about the language that has been used—"our goal is 2 percent or a bit less"—which perhaps suggests that 2 percent is a ceiling on inflation, and that could add additional policy cost. I'm just not sure how people are interpreting that, and it bothers me a bit. I think it would be useful to discuss that at some point. The Tealbook box on policy commitment and discretion is instructive on this issue about inflation rising a bit above 2 percent for a period of time. When policy commits to achieving its goals by keeping interest rates low

for an “extended period” and allowing inflation to go very modestly above the 2 percent objective, while not exceeding 2½ percent, the growth and inflation outcomes are better in those economic analyses.

Finally, a number of people have mentioned political risks, and I agree that those exist. Will we be afraid to take further actions due to this criticism? I think this cuts both ways, and I’m not really sure how to evaluate these concerns about policy risk. I prefer to think about it on the merits of what the economy needs and take the heat that we’re supposed to take when that’s the best action.

All that said, I find alternative B to be an acceptable policy today, although I think it has a stiffer dose of hope than I really prefer. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Pinalto.

MS. PIANALTO. Thank you, Mr. Chairman. I support alternative B. The data since the last meeting haven’t changed my outlook substantially, and I see little evidence of any significant financial market problems following our announcement of additional asset purchases. I favor a fairly high hurdle to make changes to the program. In other words, it would take a surprising change to the outlook for inflation or output to cause me to want to make an adjustment to the announced program. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. First Vice President Moore.

MR. MOORE. Thank you, Mr. Chairman. I’ll be very brief. I, too, favor alternative B. I recognize that our eventual withdrawal of accommodation will, indeed, be challenging, but it seems to me that the fundamental fact for policy at this time remains that we’re likely to continue to fall short on both of our mandates, not just for a short period of time, but for the next several years. Our announced asset purchase program is by no means a magic bullet, but it provides a

nudge, if not a push, in the right direction and will provide some insurance against downside risk to the economy and inflation. Thank you.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. I am in favor of alternative B, but I would like to expand on that to talk about what we should be doing in the next few months. I'm going to talk first about how we should structure further accommodation or tightening, and then offer some tentative thoughts about appropriate conditionality.

When thinking about further easing, I find it useful to return to the three tools that you, Mr. Chairman, outlined last August in Jackson Hole: the LSAPs, forward guidance, and the IOER. I would recommend against doing another LSAP for a couple of reasons. As I suggested in October, I think that we have relatively little control over its effects. Its ultimate impact depends on the accumulated stock of purchases that markets expect us to undertake, and that dependence combined with its relative novelty leaves us at the mercy of outside influences. Indeed, even tweets from former governors of Alaska can end up affecting those expectations.

[Laughter]

I like the other two tools better. The staff's analysis on pages 7 and 9 of Tealbook Part B indicate to me that forward guidance can be an effective way to provide further accommodation. I think President Evans spoke quite eloquently about that in his remarks. The work in the Tealbook is based on the FRB/US model, but it seems to me that forward guidance would emerge as a useful response to the zero lower bound in any economic model in which agents are somewhat forward-looking and the central bank is, in fact, capable of commitment. These statements I'm making about the efficacy of forward guidance do not necessarily apply to the LSAPs, which do not have that same effectiveness in a wide class of economic models.

I also like the idea of cutting the IOER rate, as President Plosser suggested last time. Now, I have to say that cutting the interest rate on excess reserves by 25 basis points is likely to have only a slight effect on the economy, but it would have the additional benefit of solving what I'm becoming convinced is a big communication problem for us. When I give speeches, I've found that the public has a hard time understanding why we're paying a positive interest on bank reserves when we're trying to stimulate the economy. They see a positive IOER rate as a sign that we're willing to subsidize the banks even at the cost of not fulfilling our dual mandate. So I think that in addition to providing some stimulus, it would have an effect of helping solve this communication issue.

Having given some of my thoughts on the easing front, let me turn now to the tightening front. My recollection is that last spring we reached a tentative consensus, though certainly not unanimity, on how to proceed in tightening. I think it's a good idea to reopen that conversation, as Presidents Lockhart and Hoenig have suggested. My recollection of that consensus was that we should begin by draining reserves, then raising interest on excess reserves, and then beginning asset sales. I was happy enough with that consensus—I can be flexible about how we would order things. I've heard some suggest that we could tighten by using the regular review process in alternative B to curtail our announced LSAP, but I don't think that's consistent with my recollection of our tentative consensus about the structure of tightening. So I don't think of the regular LSAP review process as being the right way to initiate tightening. Instead, I view our statement in November as being a strong commitment to buy \$600 billion of longer-term Treasuries over the next eight months. I've thought of the regular review process as necessary, given that we don't really know the full range of downside risks of LSAPs because of their relative novelty. For example, I thought there was a possibility, though not a high probability

one, that the dollar could have fallen to 50 euro cents, and, if it had, then I think we all would have wanted to curtail the LSAP. I thought the regular review process was a way to make clear to markets and the public as a whole that we stood on guard against such possibilities.

Having talked about easing and tightening, let me turn to conditionality. As I mentioned in the first go-round, my preferred estimate of the output gap is near minus 4 percent, rather than the Tealbook estimate of minus 6½. If I take that number and plug it into the Taylor 1999 rule on page 37 of the Tealbook Part B, I get something like minus 180 basis points. So let's call it between minus 150 and minus 200. Now, our target rate is between zero and 25 basis points and can't be negative. But suppose we assume that markets expected the accumulated stock of the Fed's purchases of long-term Treasuries will grow to be around \$2 trillion. The staff estimates in the last Tealbook would translate those \$2 trillion of purchases into a reduction in the fed funds rate of 250 basis points. All of this obviously has confidence bounds around it, but anyway, that would be the translation. So, if you put that plus 25 basis points of our current interest on excess reserves rate together with the reduction of 250 basis points, we get a policy stance right now of negative 225 basis points. It's a little low for me compared with my minus 180, but in the right ballpark, I would say.

So going forward I don't believe we should be adjusting policy to every change in the output gap or realized inflation. I view it as being a little less continuous perhaps than President Bullard sees it. But I do think we should be adjusting policy to sufficiently large changes in the output gap or realized inflation in either direction, and I'm thinking right now that those would be changes in the range of somewhere between 100 to 150 basis points. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I support alternative B. I think we should stay the course on the policy we announced in November and make minimal modifications to our statement. We said that we intend to purchase \$600 billion in additional Treasury securities by mid-2011. This decision is subject to review, but I think the bar for stopping short of \$600 billion should be set pretty high. One relative consideration is whether the outlook has changed substantially. I think the answer is “no.” Inflation is still below the levels we consider consistent with our dual mandate, and it’s continuing to trend down. Inflation surprises during the intermeeting period have been on the downside. Unemployment is even higher than we anticipated it in November, although other measures of labor market performance suggest ongoing but very gradual recovery. The outlook for growth in 2011 is slightly stronger due to the fiscal stimulus, but that stimulus is temporary, and the changes on balance are only marginal. Some downside risks to the outlook have abated, but others have increased. On balance, I still consider the risks weighted to the downside. So the value of the program in providing insurance against downside risk, something that’s especially important in the neighborhood of the zero bound, remains, in my view, a valid rationale.

A second consideration is whether potential risks associated with the program appear to be materializing. Again, I think the answer is “no.” In particular, inflation expectations have not become unhinged, and the program has not generated noticeable flight from the dollar.

The third consideration is whether asset purchases are actually efficacious in stimulating the economy. Here the incoming data strengthen my view that they are. We saw very significant movements in longer-term Treasury yields and equity prices between Jackson Hole and the November FOMC, and those seem clearly to have been conditioned on market expectations of the program. That market response was consistent with the key assumption on

which the program was premised, namely, that relative supplies of securities of different maturities matter to the structure of yields and term premiums.

Of course, we've seen an enormous run-up in longer-term nominal and real yields since the announcement. Strong data do appear to explain part of the backup; end-of-year positioning and convexity hedging likely also played some role. But I agree with Brian and the staff that a significant contributor was the scaling back of market expectations about the likely size and duration of the program. The evidence suggests that criticisms of the program and the ensuing political backlash contributed to this adverse market reaction and, at the same time, raised the degree of uncertainty concerning longer-term rates and Fed policy. Higher risk premiums due to increased uncertainty may also be pushing up yields. These market responses are unfortunate, but they serve to strengthen my view that asset purchases do matter in influencing financial conditions.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Given where the Committee finds itself today, I can accept alternative B. Let me just make a couple of brief comments. First, I'm comforted by the Committee's commitment to subjecting the asset purchases to regular review, but I don't think that that means that at every meeting we should be tweaking or micromanaging the asset purchase amount. I think that, in all likelihood, the most important policy judgment this Committee will face next will be what to do after June. Obviously, we'll have to debate that well in advance of the end of the \$600 billion purchases, but that is where the action is.

During the intermeeting period, there were some interpretations of market chatter about whether this Committee would fulfill its stated goal of purchasing \$75 billion of Treasuries a month and live up to the \$600 billion headline number. I think that is a serious misreading of

what the market chatter and questions were about. Markets have wondered during this period whether we would be doing more once the QE2 program ends. That continues to be their question. As a result, I think we should be very careful about not prejudging that question. It will be tempting, particularly in the new year, as we're all speaking and communicating to markets and giving our assessments on the economy, to put a thumb on the scale showing a bias, describing what we're comfortable or uncomfortable about. I think we'd be making a serious mistake by starting to influence what the asset purchase profile or other policy options that Narayana talked about might be once that period arrives. I think we would do ourselves far greater favors by not being terribly newsy on what happens thereafter, and by being reasonably stealthy about what our dispassionate analysis is yet suggesting, giving it more time.

And so what should we be doing during the period of January, February, and March? My vote would be to describe what policy actions more broadly could be done by the U.S. government to help the economy grow at the level that we would all hope. So that's a hope and an expectation, because I worry that we could otherwise fall into a trap of again trying to make news in the winter when we really aren't yet, at least in my view, in a position to be making any final decisions on what would happen in the post-June period. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. It's very difficult for me to determine what the effect of the \$600 billion purchase announcement has been. I confess I don't see the success of the program, but I don't see evidence of heightened risk either. I never expected big results, but now I suspect that whatever the actual results of the purchases themselves were has been swamped by the uncertainty over the size of the program, given the public debate over our policy, including communications highlighting the differences of opinions on the Committee, as

well as a surprisingly, to me, anyway, vocal outcry from economists, politicians, and foreign officials.

Nevertheless, the near-term outlook is slightly stronger now than it was at our last meeting. I don't know whether the positive surprises occurred because, as it turns out, we were just going through a soft patch anyway, or whether the lower rates and higher stock prices we experienced between Jackson Hole and our last meeting were already having beneficial effects or whether something else was at work. But I do know that right now our immediate economic future looks a bit brighter. So I think we should hold very, very still and let whatever is helping continue to work, and I support alternative B.

CHAIRMAN BERNANKE. Going to play possum. [Laughter] Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. I support alternative B as well. For the reasons stated by Narayana and Kevin, I wish that it communicated rather more precisely than I think it does what the threshold for a change in our intended path ought to be, but it's 12:35 p.m., and if we get into a discussion of that, we're not likely to finish in a timely fashion.

I would also reinforce Kevin's caution about the impact of "FOMC chatter." We used to refer to that as what other people said about the FOMC. Now it's the FOMC itself that seems intent on chattering continuously in a way that I just don't think is helping communications or the integrity and external perception of this Committee. That's it. Everything else looks fine.

CHAIRMAN BERNANKE. Thank you. Governor Raskin.

MS. RASKIN. Thank you, Mr. Chairman. I would support alternative B. I also believe that the verdict on our latest round of LSAP purchases is still out. I'm discouraged by the rise in

the longer-term yields since our last meeting but am well aware that there's no way of knowing where yields would have been if we had not acted.

At the very least, we've learned that the communication of monetary policy is as critical to the conduct of monetary policy as is the actual decisionmaking. I think more work has to be done in identifying up front the various audiences of our actions with an eye to considering how to tailor the message of our policy decisions.

Regardless of the ultimate verdict on this round of large-scale asset purchases, I think it would be premature to reverse last month's decision. I believe it has been somewhat successful in moving us towards meeting our dual objectives. In any event, the fact that there is a significant hole to dig out of suggests the need for no reversal. In addition, and significantly, such a reversal would, at the least, cause confusion and could well threaten the Fed's credibility.

Thanks.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Thank you, Mr. Chairman. Governor Raskin just sort of took the words right out of my mouth. I am not a fan of QE2, as you know. I would balk at expanding it. I see no economic justification, and I think it would be politically suicidal to do so. That's a little bit less erudite and academic than your presentation, President Kocherlakota, but I'm happy not to hear anybody advocate for alternative A. I was going to suggest that, if they were, they had been living on Pluto and then I'd remind them that Pluto is no longer part of the official planetary system. [Laughter]

At the same time, I think it would be a mistake to pare it back at this juncture. The strong economic growth that my staff and I envision has not yet been confirmed by the data, and I think

correcting course after making the very tough decision that we made at the last meeting would make us look extremely indecisive and make us quite vulnerable.

Now, I want you to bear with me for a minute here because I'm sympathetic to many of the arguments that President Hoenig and others have made. At the last meeting I attempted to provide a sober assessment of the possible costs that should at least be considered alongside the surmised benefits of the LSAP, and I expressed skepticism about what likely happened on the foreign exchange front and warned about speculative activity in stocks and commodities. I believe I used the term "monetary kudzu," something that would be very difficult to cut back long term, and I concluded that we could possibly be prescribing the wrong medicine at the wrong time given the economic circumstance.

But the most worrisome to me, as I stated, was the cost of possibly placing our quasi-independence in jeopardy, and I said that we know that once the central bank is perceived as targeting government debt yields at a time of persistent budget deficits, the concern about debt monetization quickly raises its ugly head, and I went on to say I expect the propensity to draw that conclusion has been enhanced by this congressional election—that we'd be waving a red flag in the face of those who are our most volatile critics. So I wasn't surprised, Governor Duke, at the reaction that we received.

Now, I made my best arguments. The Committee decided to pursue a course. There were others who made similar arguments, but the Committee made a decision. When I was an undergraduate I was disappointed not to receive a scholarship, and a friend of mine, who became a well-known folk singer named Tom Rush, gave me a great lecture about making the best of a bad situation. I'll summarize it and clean it up a little bit, but I think it gets to the point.

He told me a story about a neighbor who would go to work every morning, very diligent, and 10 minutes after he left, the milk truck would pull up and the neighbor's wife would come out in her kimono, and the milk truck driver would kiss her on the cheek and go into the house and come out two hours later. It bothered the heck out of Mr. Rush, so he went up to his neighbor, and he said, "You know, it's none of my business, but I want you to know what's going on." And the neighbor said, "Well, yeah, but look at it this way. We'll never run out of milk or cottage cheese or yogurt."

I think we need to make the best of this situation. The people who did voice concern mainly were coming not from theory, but from the marketplace or from the real economy. Remember that, in theory, theory and reality are the same, but in reality they're not the same, and we have to be driven by the reality that we hear from people who come from financial market backgrounds or from the real economy or from the Districts. I hope that one byproduct of making the best of the situation is weighing very carefully the input from the Banks and the Districts, as well as the theory that we try to put into practice.

I would also say that we must not make the situation worse. I do believe we are politically vulnerable. I listened very carefully to the comments you all made recently, and there's a subtext there. I think we have to be very careful about what we say, and I think we need to unify as a team. Otherwise those who mean us harm will take advantage of the cacophony that comes out of this Committee. I confess that I may have been part of that cacophony. I haven't said a word publicly since November 8, and there's a reason for it: Once we make a decision as a Committee, I think we have to knit together and get our message very clear. Of course, we should allow dissent, and I may well dissent in the future. But knitting together and being very clear about our message are important because there are a lot of people

just looking for opportunities to tear us apart, and I think there's going to be a great proclivity for that, particularly going forward politically.

So, in summary, Mr. Chairman, if I were a voter, I would support alternative B. I'm sympathetic a little bit to the comment about the \$600 billion, but the \$600 billion is already in there. Having looked at the chart we were given earlier by the Desk, if we took the \$600 billion out and just talked about \$75 billion, I think we'd see that number all over the place in terms of expectations. As others have mentioned, I do take it seriously when you say that we'll regularly review the pace of the securities purchases and the overall size of the asset purchase program. I learned earlier today that Bill Dudley and I had the same dreams when we were kids. We both wanted to be physicists, believe it or not, and I do believe in the physical principle of—

VICE CHAIRMAN DUDLEY. I'm not sure what to make of that.

MR. FISHER. We both would have been a disaster. But I do believe in stochastic optimal control, and what that means in terms of a rocket launch is that you continually reevaluate the course you're going through time, and I take the Committee at its word that we will do so. But for now, Mr. Chairman, to change course and not embrace alternative B I think would be a serious mistake, and I hope that all of us, including myself, in terms of our future expression are able to convey the seriousness with which these decisions are made and support the Committee as a whole, even if we are tempted to dissent and even though at times we are uncomfortable with the decision that's made. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN DUDLEY. Thank you, Mr. Chairman. I'm glad to see that Richard and I are on the same page today, just as we were when we were children. [Laughter]

MR. FISHER. There's a big space in between though.

VICE CHAIRMAN DUDLEY. I do want to talk about how we communicate as a group to the market and the public. I think we've done a very poor job relative to what we're capable of, and I think that judgment is borne out in a number of ways. One way is the low score we received in the recent primary dealer survey conducted by the Desk, even though the survey and its comments said the Chairman did a very good job on *60 Minutes*. That was cited by a number of the respondents.

It is not helpful for opponents of any policy we embark on, whether asset purchases or other actions, to criticize the policy in public in harsh terms as soon as possible after an FOMC meeting is over. I really do think there are right ways and wrong ways to disagree. I think dissent is completely appropriate, and I'm not trying to discourage that. I think the right way is to say that reasonable people may disagree, but this is the decision made by the Committee. This is why the Committee is doing what it's doing, and here's how the Committee expects this particular policy action is likely to work in practice.

I think the wrong way is to paint the consequences of the decision in more apocalyptic terms and/or to create doubts and fan fears about the ability and/or will of the FOMC to execute policy successfully. In my opinion, some of the most recent comments we've seen have undermined the effectiveness of the most recent round of LSAPs. I say this not only because of our poor communications score, but also because the evidence suggests that a good portion of the backup in bond yields is due to a higher risk premium. When I ask myself how the higher risk premium got there, obviously it was the critique of the Fed by outside observers, but I think we also did a little bit of that to ourselves. I think the higher risk premium stems from uncertainty about our commitment to the program—in other words, would we be cowed by the criticism—and thereby represents a loss of credibility on our part.

That being said, it isn't the only reason that bond yields have risen. I think there are lots of other reasons, and they've been talked about this morning. First, expectations going into the last meeting were for a somewhat larger program than what we actually initiated. Second, Treasury supplies likely increased due to the shift in fiscal policy, so the net supply held by the public is going to go up relative to what the public expected. And, third, the economy looks like it's on a more solid growth track. So these three factors all interact. More stimulative fiscal policy implies faster growth, and it implies more net supply, as well as a smaller expected LSAP program.

Overall my policy view hasn't changed. The LSAP program still makes sense, and it's helping at the margin. We have damaged its effectiveness to some degree. I think it's important in reaching this conclusion to note that some of the primary risks of the asset purchase program, such as dislodging inflation expectations to the upside or causing a free fall in the dollar, have not materialized in any way. Instead, the dollar has been strengthening, and the increase that we've seen in the yields have occurred entirely in real rates rather than in break-even inflation rates, at least as we measure them from November to today. So I'm with pretty much everybody else, not quite everyone, in supporting alternative B. I think we want to have a "low drama" meeting as Governor Duke said. So I don't mind playing possum either. I think the small changes contemplated in alternative B are right. They acknowledge some of the intermeeting data. We still have a long way to go in terms of our dual mandate.

A very accommodative policy stance to me is still fully appropriate. Any retreat from our LSAP program at this juncture I would view as disastrous, not just because yields would back up further, tightening financial conditions, but also because such a shift would significantly undercut our credibility. We would be viewed as weak and as intimidated by outside criticism

and political pressure, and that would be, I think, devastating to this institution. To my mind, this would cause our independence and our will to keep inflation in check over the longer term to be questioned. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you, and thanks to everyone for your comments. Substantively, of course, I am supportive of staying the course and alternative B—I gave my reasons earlier. Notwithstanding the very welcome improvement in the tone of the data, the general contours of the recovery remain similar to what they were in the last couple of meetings. We are still missing our objectives by a wide margin, in expectation, not just currently. I agree with President Kocherlakota that measuring the stance of policy is quite difficult and can be quite humbling, but I think it's not at all clear that our policy is excessively easy given the state of the economy. So I think we should stay where we are. We should take more time to assess developments in the economy. For those who mentioned it, I remain serious that we should continue to review the policy on three grounds: What's happening to the outlook, what's happening to the efficacy of the policy, and what's happening in terms of any side effects. I think a responsible approach would involve all three of those aspects. For today, I counsel watching and waiting to see how the outlook evolves. It could change sharply—it has done so in the past, and in that case we would need to be willing to respond to that.

I have two comments on communication. Several of you have already spoken about it. The first is that we have multiple objectives in communication. One, of course, is to give our views, which is very important, but we also want to convey the fundamental collegiality, comity, and mutual respect in this Committee, which I think we need to make clear to everyone. Another is that we need to do everything we can to maintain the independence of this institution to make policy. We should be free to make mistakes, and we need to convey clearly that that's

something we all share. The main thing we can do that would be constructive, as far as I'm concerned, is to pull down the heat a little bit. You know, I'm not asking for any real changes. Let's just keep the heat down and give this policy some chance to work or not to work and give ourselves some time to make a better assessment, and I think that will work fine.

The other aspect of communication was, I think, raised a bit by President Lockhart and President Evans. It's a little ironic that this Committee has spent years and years talking about inflation targets and similar kinds of structures, and one of the main issues has been whether we could succeed politically in creating an inflation target or whether there would be pushback from the Congress, etc. I think we're at a moment that if we wanted to do something like that, it would actually be welcomed by the political world. I see absolutely no problem whatsoever from a political perspective if we want to go ahead and put some more structure, whether it's an inflation target or some other kind of structure, on our policymaking. Yet, in our video conference discussion of this, we just kind of talked ourselves out of it somehow, I think possibly because we couldn't come to agreement on some appropriate way to talk about the other part of the mandate. It seems to me that was kind of a shame. I'm not suggesting anything specific, but maybe we can continue to talk about this informally, because I do think there would be very little resistance at this point. In fact, a number of people would probably welcome it if we were to be more explicit about our inflation objective, and it might help with the communication issue going forward. But that's something for the intermeeting discussions and for future meetings.

Turning back to the business of this meeting, I'd like to propose alternative B as it stands, and thank you again for a thoughtful discussion. Debbie.

MS. DANKER. This vote covers the statement and directive for alternative B in the handout.

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

CHAIRMAN BERNANKE. Thank you very much. The next meeting is Tuesday and Wednesday, January 25 and 26. We will have a special topic at that meeting on structural unemployment, obviously a topic of great interest to all of us. A number of the Reserve Banks are working very hard on this, and we thank you for your contribution. The Board is also involved in this project. So I look forward to that discussion. There will be a lunch as soon as the meeting is adjourned, and Linda Robertson will provide us with a legislative update. Thank you all very much, and have a safe trip home. Meeting adjourned.

END OF MEETING