Meeting of the Federal Open Market Committee
December 13, 2011

A joint meeting of the Federal Open Market Committee and the Board of Governors of the Federal Reserve System was held in the offices of the Board of Governors in Washington, D.C., on Tuesday, December 13, 2011, at 8:30 a.m. Those present were the following:

Ben Bernanke, Chairman
William C. Dudley, Vice Chairman
Elizabeth Duke
Charles L. Evans
Richard W. Fisher
Narayana Kocherlakota
Charles I. Plosser
Sarah Bloom Raskin
Daniel K. Tarullo
Janet L. Yellen

Christine Cumming, Jeffrey M. Lacker, Dennis P. Lockhart, Sandra Pianalto, and John C. Williams, Alternate Members of the Federal Open Market Committee

James Bullard, Esther L. George, and Eric Rosengren, Presidents of the Federal Reserve Banks of St. Louis, Kansas City, and Boston, respectively

William B. English, Secretary and Economist
Deborah J. Danker, Deputy Secretary
Matthew M. Luecke, Assistant Secretary
David W. Skidmore, Assistant Secretary
Michelle A. Smith, Assistant Secretary
Scott G. Alvarez, General Counsel
Thomas C. Baxter, Deputy General Counsel
Steven B. Kamin, Economist
David W. Wilcox, Economist

Thomas A. Connors, Loretta J. Mester, Simon Potter, David Reifschneider, Harvey Rosenblum, and Lawrence Slifman, Associate Economists

Brian Sack, Manager, System Open Market Account

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

Robert deV. Frierson, Deputy Secretary, Office of the Secretary, Board of Governors

Maryann F. Hunter, Deputy Director, Division of Banking Supervision and Regulation, Board of Governors; William Wascher, Deputy Director, Division of Research and Statistics, Board of Governors

Andreas Lehnert, Deputy Director, Office of Financial Stability Policy and Research, Board of Governors

Andrew T. Levin, Special Advisor to the Board, Office of Board Members, Board of Governors

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

Seth B. Carpenter, Senior Associate Director, Division of Monetary Affairs, Board of Governors; Michael P. Leahy, Senior Associate Director, Division of International Finance, Board of Governors

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

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

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

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

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

Jeff Fuhrer and Mark S. Sniderman, Executive Vice Presidents, Federal Reserve Banks of Boston and Cleveland, respectively

David Altig, Alan D. Barkema, Richard P. Dzina, Spencer Krane, and Christopher J. Waller, Senior Vice Presidents, Federal Reserve Banks of Atlanta, Kansas City, New York, Chicago, and St. Louis, respectively

Mary C. Daly, Group Vice President, Federal Reserve Bank of San Francisco

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

Samuel Schulhofer-Wohl, Senior Economist, Federal Reserve Bank of Minneapolis

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CHAIRMAN BERNANKE. Good morning, everybody. This is a joint meeting of the FOMC and the Board. I need a motion to close the meeting.

MS. YELLEN. So moved.

CHAIRMAN BERNANKE. Thank you very much. I'd like to start with a few brief comments on FOMC information security. As you probably know, there have been a few issues recently, and as our rules require, I've asked Bill English and Scott Alvarez to look into them, and when we have some resolution, I'll certainly be reporting back to the full Committee.

I also wanted, though, to mention today some press reports on the timing of our communications initiatives. It appears that at least one report had information about the agenda, in particular, that we would be discussing those matters today and providing public information in January. The substance of our discussions today on interest rate projections and on principles, inflation targets, and those sorts of issues, are well known. They were in the minutes, and they were discussed by a number of people in speeches, and so on, but it does complicate the work of the subcommittee and of this Committee if the expectations of the public are for delivery of certain outcomes at certain dates. My own sense is that there was not really any reason to intentionally leak this information, but I want to take the opportunity once again to remind people that reporters are very good at piecing together little bits of information from many sources. When they come to you and say, "Well, I've heard that X," it's a little hard for each of us in dealing with that. Let me take note of that and ask people, as always, to be careful in their interactions.

Let me turn now to item 1 on the agenda. With the retirement of Nathan Sheets, we need to appoint a new FOMC Economist. There is a proposal that Steve Kamin replace Nathan until

January when we'll have our annual organizational meeting. Is there any objection? [No response] Seeing none, thank you. Our second item is "Financial Developments and Open Market Operations," and I'll turn, as usual, to Brian Sack.

MR. SACK.[1] Financial markets have remained volatile, with investors heavily focused on the policy steps taken to address the European sovereign debt crisis and the associated pressures on bank funding.

Market sentiment had improved notably in advance of last week's summit of European Union leaders, as investors hoped for considerable progress toward establishing mechanisms that would ensure fiscal discipline by European governments and strengthen the support available to those governments if needed. Many market participants thought that those steps would open the door to more aggressive purchases of European sovereign bonds in the secondary market by the European Central Bank. These expectations contributed to a sharp narrowing of the spreads on Spanish, Italian, and French debt, as shown in the upper-left panel of your first exhibit.

However, market expectations apparently got a bit ahead of reality. Important policy steps were in fact agreed to at the EU summit, as Steve Kamin will review. However, they do not put to rest the risks associated with sovereign debt, and many uncertainties remain about the implementation and enforceability of the steps taken. Moreover, comments by ECB President Draghi ahead of the summit were seen as backing away from more aggressive bond purchases, and ECB officials gave no indication after the summit of a shift in that posture. In response to these developments, the spreads on those debt securities again turned higher in recent days, reversing much of the earlier declines.

Needless to say, market participants see the situation surrounding European sovereign debt as very uncertain, resulting in remarkable volatility in these securities and very poor liquidity at times. This is not the type of environment that is conducive to attracting private capital back to the market, which is of great concern considering that Italy and Spain have financing needs in excess of €500 billion next year. These tensions are further exacerbated by the decision by S&P to place the long-term credit ratings of 15 euro-zone countries and the EFSF on negative credit watch. Moody's yesterday also indicated that it would review the sovereign ratings of euro-area countries.

In contrast to the uncertainties surrounding the support of sovereign debt, central banks took clear and decisive steps regarding the provision of liquidity to the financial sector. The ECB announced that it would extend its fixed-rate, full-allotment operations in euros to a horizon of three years, and it made several adjustments that will help loosen the constraints that some banks are facing on the

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

availability of collateral for such operations. As shown in the upper-right panel, banks have been tapping the ECB's facilities for larger amounts of euro liquidity in recent months, with much of the increased borrowing coming from French and Italian banks.

Of course, central banks also took actions to address global funding needs in dollars. On November 30, the Federal Reserve, along with five central bank counterparties, announced changes to the liquidity swap arrangements, including the decision to reduce the rate on those transactions to 50 basis points over the OIS rate. The reaction in financial markets was favorable. The implied dollar funding rate that could be obtained through FX swaps fell about 40 basis points after the announcement, as shown in the middle-left panel. Moreover, while the dollar LIBOR rate did not react, a forward measure of the rate came down about 15 basis points, as shown to the right.

The first set of operations by the foreign central banks to inject dollar funding under this new pricing saw a meaningful pickup in demand. In particular, the ECB received nearly $51 billion of bids at its 84-day dollar operation last week, spread across 34 bidders, and about $1½ billion at its 7-day operation. This outcome was seen as encouraging, as the broad participation suggested that the stigma around the swap lines had been reduced. The Bank of Japan placed nearly $5 billion at its 84-day operation earlier today, while other central banks saw minimal participation in their operations.

The policy measures taken in recent weeks have also affected the amount of risk that investors perceive for the financial sector. Five-year CDS rates for major European and U.S. financial institutions, shown in the bottom-left panel, came off their peaks in response to the swap line announcement and to hopes about the outcome of the EU summit. However, these measures remain quite elevated, as the tensions surrounding the European situation are seen as presenting some systemic risk for the financial sector. In addition, some of the largest domestic banks and broker–dealers were downgraded by S&P as a result of a new methodology that the company is employing. However, the downgrades were largely expected and did not elicit any notable response in financial markets.

The financial stress in Europe, along with increasing evidence of a sharper slowdown in European economic growth, caused the euro to weaken notably against the dollar, as shown in the bottom-right panel. The dollar has strengthened more broadly since the summer, as indicated by the trade-weighted index, in part because of safe-haven flows into dollar assets.

As highlighted in the upper-left panel of your second exhibit, U.S. equity prices have also been driven to a large extent by European developments. After falling early in the intermeeting period, equity prices rebounded sharply in response to the swap line announcement and in expectation of possible actions at the EU summit. On balance, the S&P index ended the intermeeting period modestly higher.

Equity prices were also supported by the backdrop of favorable U.S. economic data. As shown in the upper-right panel, the economic data generally came in above expectations, leading investors to revise up their projections for fourth-quarter GDP growth. However, judging from the Desk's survey of primary dealers, market participants have not raised their GDP forecasts over the next two years. Indeed, respondents continue to expect the recovery to be modest, with the median forecasts of GDP growth in 2012 and 2013 coming in at 2.1 percent and 2.5 percent, respectively. The unemployment rate is expected to remain elevated, and inflation is expected to be low.

The strains that are present in Europe are seen by market participants as an important factor weighing on the outlook for the U.S. economy. In its survey, the Desk asked how the dealers' forecasts for 2012 U.S. GDP growth would be affected by a timely and convincing resolution of the European fiscal and banking situation. As shown in the middle-left panel, the responses were fairly evenly distributed over a wide range, suggesting that it is difficult to calibrate the effects. Nevertheless, many of the responses indicated fairly sizable effects, with the median response at ½ percentage point of annual GDP growth. In addition, market participants likely see the situation in Europe as presenting significant downside risks around the baseline forecast. Indeed, many respondents to the survey indicated that the risks to their GDP forecasts are skewed to the downside.

The subpar economic outlook has supported the view that monetary policy will remain accommodative for a long period, which has kept Treasury yields at very low levels. As shown in the middle-right panel, Treasury yields were little changed, on balance, over the intermeeting period, with the 10-year yield currently near 2 percent. Primary dealers continue to nudge out their expectations for the path of the federal funds rate. As shown in the bottom-left panel, respondents see a nearly 50 percent probability that the first policy tightening will not occur until the second quarter of 2014 or later.

The Desk's survey also asked primary dealers about the likelihood of additional policy steps. As reported in the bottom-right panel, while dealers are generally not anticipating such steps at this meeting, they see considerable odds of several types of actions taking place over the next year, with an 80 percent probability assigned to changing the guidance for the federal funds rate and a 60 percent probability assigned to expanding the balance sheet further. While we did not ask about it in the survey, market participants seem to expect that further balance sheet expansion, if it occurs, will be partly or fully concentrated in MBS.

The survey also included a question about the likelihood of two structural changes to FOMC communications over the next year. About 75 percent of respondents said that they expect the FOMC to provide more information on its policy objectives, such as specifying its longer-run inflation goal. A similar portion expects the FOMC to provide information about participants' assessment of appropriate monetary policy in the Summary of Economic Projections.

I should briefly note that the publication of the Desk survey questions did not attract a large amount of attention and was generally described as a useful step toward greater transparency. Our plan is to publish aggregated responses to the survey the day after the release of the FOMC minutes.

Your third exhibit turns to recent Desk operations and developments in the SOMA portfolio. The Desk continues to implement the reinvestment program into agency mortgage-backed securities. This program will prevent a further decline in our MBS holdings, shown by the red area in the upper-left panel. In fact, these holdings will slowly increase to crowd out the light blue area on the chart, as we are also reinvesting our maturing agency debt into MBS. Over time, if this reinvestment approach were maintained and no additional policy steps were taken, the MBS holdings in SOMA would settle at about $1 trillion, or just over 35 percent of the domestic assets held in the portfolio.

We have had no difficulties executing our MBS purchases, and those transactions appear to have taken place at prices close to those observed in other market transactions. This pattern can be seen in the chart on the upper right, which shows our execution prices (the red dots) relative to the range of prices reported by broker–dealers on those days through the TRACE system (the blue area).

In an important change to the MBS program, the Desk implemented a margin requirement for our unsettled MBS purchases. Recall that our MBS purchases settle on a forward basis over periods that can extend out several months. This creates a counterparty exposure when unsettled trades move in a favorable direction for us because the failure of a dealer in those circumstances would leave us having to replace those unsettled trades at a higher price. As I noted in my briefing at the November FOMC meeting, ahead of the failure of MF Global, the Desk asked for cash margin from that firm to cover this risk. We have now moved to a regime in which we require this type of margining from all of the dealers to reduce such exposures.

The amount of margin that the dealers have to post as collateral is updated every day based on the market value of our unsettled transactions. The middle-left panel shows the amounts that dealers had provided as of last Friday. In aggregate, the margin from dealers that day totaled nearly $2 billion. Even though the margin requirement is an additional burden for the dealers, we have seen no obvious deterioration in the quality of the bids that we receive on MBS purchases since the new regime went into place.

I also wanted to highlight another development related to our MBS reinvestments, which is that the Desk has been engaging in dollar roll transactions. As mentioned earlier, the MBS purchases that we conduct could be for delivery in any of the subsequent several months. The Desk makes a judgment about which settlement month to operate in based on the expected amount of production of MBS in those months. However, subsequent changes in production and other factors can cause either a scarcity or abundance of securities that are available for settlement. In

response to such developments, the Desk has been engaging in dollar roll transactions to adjust the timing of the settlement of our trades. In particular, using dollar rolls, we brought forward the settlement of some of our purchases of 3.5 percent coupons from January to December.

In terms of our other set of current open market operations, the Desk has been implementing the maturity extension program in Treasury securities. As shown in the middle-right panel, to date the Desk has purchased just over $107 billion of securities in the 6- to 30-year maturity sector and has sold about $100 billion of securities in the 0- to 3-year maturity sector. Thus, we are roughly one-fourth of the way through the $400 billion program. As can be seen, these operations have been well received, with sizable bid-to-cover ratios. The table also shows the difference in the duration between the securities that have been purchased and those that have been sold. Given that difference in duration, the program so far has removed, on net, about $100 billion of 10-year equivalents from the market, despite little change in the overall size of the SOMA portfolio.

The final two exhibits focus on the euro-denominated reverse repurchase agreements that are held in the SOMA portfolio. As you know, these investments accept six types of sovereign debt as collateral—that from Germany, France, the Netherlands, Belgium, Italy, and Spain. As shown in the bottom-left panel, the volatility of this collateral has increased over the second half of 2011, particularly for Belgian, Italian, and Spanish debt. This volatility has reduced the effectiveness of our 2 percent haircut on this collateral in these transactions, raising the risk that the SOMA would face losses in the event of a counterparty default.

However, the shift to our new approach of accepting offers that are specific to each of the six types of collateral has helped to offset this risk. Under our previous regime, about 60 percent of the collateral being presented in these transactions was Belgian, Italian, and Spanish debt, as shown by the light blue bars in the panel on the bottom right. With the new regime, we have eliminated the incentive for our counterparties to deliver us disproportionate amounts of that collateral, and we have imposed other steps to better control the distribution of collateral. In response, the collateral in these transactions has shifted significantly toward German securities, as indicated by the dark blue bars.

Overall, as you can see, we have had a lot going on at the Desk in recent weeks.

CHAIRMAN BERNANKE. You've been earning your salary, Brian. [Laughter]

MR. SACK. It's mostly your fault, but we'll put a little bit of blame on Europe, too.

CHAIRMAN BERNANKE. Thank you. Questions for Brian? President Lacker.

MR. LACKER. On exhibit 2, chart 12, the middle option is “Provide SOMA Guidance.” Because I’m not familiar with that from past Committee discussions, I’m assuming you put it in there to reduce the information content of the questions you posed to market participants.

MR. SACK. What we’ve done with that question to reduce the information content that this question could present, is to ask about this entire range of possibilities on both the easing side and the tightening side. And we ask about probabilities for this meeting one year ahead and two years ahead on both sides. We wanted to present a full range of possibilities that has been discussed in the public.

MR. LACKER. Is “Provide SOMA Guidance” the wording that you gave them or is there something more fulsome? I’m not quite sure what it means.

MR. SACK. Well, what it is intended to mean is to provide explicit guidance on the path of the SOMA portfolio. To some extent, the Committee has already done this in that its exit principles have laid out sequencing of portfolio adjustments relative to the adjustment in the funds rate.

MR. LACKER. Guidance would have something to do with timing, right?

MR. SACK. Right. The exact question is “provide guidance over the period over which the SOMA will remain at the current level.” But that’s in the wording of this question for a number of surveys now.

MR. LACKER. I think the measures you’ve taken to reduce implicit signaling are worthwhile, very good. I applaud you on that.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. First, Brian, you have all of our sympathy for the hard work you’ve done all year and the excellent work you’ve done all year. I have four questions if I may quickly ask

them, and maybe we could answer some of them outside of this meeting. If my memory is correct, in terms of the 20-plus-year maturity allotment in the maturity extension program, roughly 29 percent of our allocated purchases would be in that area. A lot of holders of those instruments are basically matching liabilities, are buyers and holders, and my question is: Do you still feel comfortable with that 29 percent allotment in terms of a portion of the market? Or have you thought about readjusting that? Are we reaching any constraints? Then I have three other questions after this, if I may.

MR. SACK. We are comfortable with the performance so far. That was an area of the yield curve that we were somewhat worried about as we structured the maturity extension program. Of course, the reason we ended up proposing such a large allotment that far out was to get the duration effects within the maturity extension program. Given the limits of that program, you have to shift your purchases farther out to get the effects. But we did have some concerns because the liquidity of the bond sector is not as good as the rest of the curve, and as you saw, in asset purchase programs where we had the flexibility essentially to choose wherever on the curve we want to operate, we tended to focus more in the 2 to 10-ish sector in part because of the greater liquidity. Having said all that, I think we're comfortable with the performance so far. There are no obvious problems being created by our purchases. We're seeing some worsening of liquidity out there in recent weeks, but we attribute that more to year-end effects, so we'll continue to watch that.

MR. FISHER. The second question has to do with inventories being maintained by dealers in the corporate sector. If my information is correct, they're pretty near historic lows, and I'm wondering—again, being an advocate of stricter capital standards—if that's a legitimate excuse, because I hear some of that, or is it something else at work in the marketplace?

MR. SACK. You're right. Inventories have fallen a lot, and that's part of a story that market participants have been telling about liquidity being very poor in corporate bonds. Some of that has likely had to do with the large shifts in investors' risk preferences and at times with concerns about all types of risk assets. Again, in part it may have to do with approaching year-end. It's something we can continue to watch, but, yes, liquidity hasn't been great in corporate bonds.

MR. FISHER. It has been trending down in terms of dealer inventories.

MR. SACK. That's correct.

MR. FISHER. And then last, you talk about mortgage-backeds in your presentation. We own roughly 15 percent of all agency mortgage-backed securities and about 20 percent of the fixed-rate conventional pass-throughs? Is that correct, presently?

MR. SACK. You're asking about how much of the total stock of pass-throughs—

MR. FISHER. I'm wondering what the capacity is if we were to expand and how much space there is for us to do so, because the fixed-income markets are not divided into these neat compartments. We often think about them that way, but that's not the way they actually operate. I'm trying to get a sense of were we to come forward with a proposal to expand the portfolio there, how much resistance or how much impact do we have in the marketplace, not simply the MBS portfolio, but all fixed-income activities, particularly given the inventory levels that are being maintained by dealers.

MR. SACK. Right. Alternative A in the Tealbook has an asset purchase program of $500 billion focused in mortgage-backed securities. We made a judgment that that was within the capacity of the Desk, in terms of the flow and the stock that we'd end up taking out under that program. If the Committee were interested in scaling up the program meaningfully above

that, we’d have to explore just how far we think we could go, but at a minimum it would certainly require extending the duration of that program so that it’s executed over a longer period.

MR. FISHER. So the two numbers here, that would probably push us to 25 or 35 percent. Is that the rough ballpark?

MR. SACK. The $500 billion?

MR. FISHER. Yes.

MR. SACK. Probably not quite to 30 percent, but we could check the number and let you know.

MR. FISHER. The last question is: What is a “fully convincing resolution” of the European crisis? [Laughter]

MR. SACK. We struggled with this. I will admit that’s not an overly precise question. [Laughter] We wanted to at least try to calibrate some of the effects of Europe in the baseline forecast, and it was actually hard to write a question to do that. We wrote it in terms of measuring how things would improve if there were a policy solution, but of course, we couldn’t be overly precise by what we meant by a policy solution. Take that question for what it’s worth.

MR. FISHER. Or the ECB is going to hire Brian away because he has the answer and he’s not sharing it.

MR. SACK. We gave some sense of the calibration of these effects, but we’re all realizing it’s not a very precise question.

MR. FISHER. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Other questions for Brian? Yes, President Plosser.

MR. PLOSSER. To follow up on Richard's question, one of the things that strikes me about the dealer survey questions—particularly this one about how is GDP going to be affected by the European play-out—is it's not clear to me that the dealers themselves are the right population to be surveying on the answer to that question. There are other groups, other economists, and other types of groups in the financial markets and outside the financial markets that might have something useful to say in response to that. The question I'm asking is: Have you given any thought to expanding the survey to different groups that might be a little outside the dealer network, if you will, to broaden the perspective on the types of answers you might get to at least some of these questions?

MR. SACK. We have primarily been interested in using the survey to get the views of financial market participants. At times we've gone beyond the primary dealers to include a number of buy-side firms who would have views, but again, still in a set of respondents closely associated with financial markets. I'd like to view the purpose of this survey as really trying to gauge the expectations incorporated into asset prices. That doesn't mean there are not other groups beyond financial market participants who have very informed views about these issues, but I wouldn't leave it to the Desk to explore those.

CHAIRMAN BERNANKE. Okay. Let's turn to item 3, "Economic and Financial Situation." Steve, will you be leading off?

> MR. KAMIN. In a classic sequence from the comic strip "Peanuts," Lucy urges Charlie Brown to run and kick the football, promising that this time, she won't pull it away at the last second. As we wrote down the Tealbook forecast of the global economy last week, we were faced with our own Charlie Brown moment: Would European leaders finally deliver on their promise to alleviate the region's fiscal and financial strains or would their efforts once again fall short, dooming the markets so eagerly running up in advance of last Friday's summit to another unseemly pratfall? With the experience of the failed summit programs of July and October still fresh in our minds, we assumed that the Friday summit announcement would indeed fall short. We were not disappointed.

In order to restore investor confidence, any agreement by European leaders would have to achieve two objectives. First, it must convince investors that vulnerable European governments will eventually achieve fiscal sustainability. Second, it must ensure that these governments can finance themselves until that sustainability is achieved. Regarding this second point, investors were hoping that the summit agreement would provide the ECB with credible assurance that it could step up its support for vulnerable governments without removing the incentive for those governments to follow through on their fiscal commitments.

To be sure, the plan announced last Friday takes some important steps forward. First, it introduces stronger mechanisms to discipline the fiscal performance of participating European countries in the longer term, including imposing a ceiling on their structural budget deficits of only ½ percent of GDP. Second, the plan includes a number of measures to bolster the nearer-term financing of vulnerable European governments. It proposes that European countries lend €200 billion to the IMF, which could help finance an IMF loan to Italy, Spain, or other European governments. And it moves up the creation of the permanent European rescue facility, the ESM, to mid-2012. Pending an additional agreement by European leaders, this would allow its €500 billion in lending capacity to augment the roughly €270 billion remaining in the temporary facility, the EFSF. Third and finally, it removes the requirement in the ESM that future rescue lending to governments be accompanied by a restructuring or rolling over of their liabilities to private creditors. This measure seeks to reassure investors that Greece’s restructuring will be the exception, not the rule.

Although markets moved up on the Friday announcement of the plan, they gave up those gains yesterday, and the plan is unlikely to fully restore investor confidence in the near term. To begin with, nearly all the details regarding timing and implementation of the so-called fiscal compact remain up in the air, and with participating governments having until March 2012 to sign the agreement, we can expect continued market volatility as prospects for the deal wax and wane. Furthermore, the financing measures in the plan fall well short of the unconditional guarantee of sovereign funding needs that the markets appear to be seeking. The €500 billion that the ESM could bring to the table would not materialize until the middle of next year. And the €200 billion loan to the IMF is only one of many steps needed for the IMF to support an embattled European government: That government has to swallow its pride and request an IMF program; the IMF has to approve the program; and then the government has to fulfill the fiscal conditions of the program for a sustained period. Finally, it is very uncertain whether the ECB will derive sufficient comfort from the fiscal compact to step up its provision of sovereign financing—ECB President Mario Draghi has voiced support for the agreement but has also downplayed the likelihood of aggressive ECB action in support of sovereigns.

In consequence, our best guess is that financial conditions will remain highly strained, and quite likely deteriorate further, in the coming months. Such deterioration would raise the risk of catastrophic events such as the default of a major

European economy or failure of a large bank. In the face of such a challenge, we believe the ECB would ultimately be moved—in conjunction with IMF lending—to provide much stronger assurances of financing to vulnerable European governments. But even so, it will probably take well into next year for investor confidence to be regained and for financial stresses to ease.

Accordingly, we are now predicting a much longer and deeper recession for the euro area than we did back in October. Euro-area GDP barely edged up in the third quarter, and since then, PMIs have fallen further into contractionary territory, consumer and business confidence have continued to slide, and the unemployment rate has risen to 10.3 percent, its highest level in more than 10 years. In our forecast, euro-area output drops about 1½ percent over the current and next four quarters, similar in its depth and length to the recession accompanying the ERM crisis of the early 1990s. This is followed by an exceptionally anemic recovery in 2013, because even as the financial situation improves, vigorous fiscal consolidation subtracts nearly 2 percentage points from growth in that year.

Fortunately, the outlook for most other foreign economies is less bleak. To be sure, even excluding the euro area, foreign real GDP growth is estimated to have slowed in the current quarter, to about 3 percent from 4¼ percent in the third. Some of this slowing reflects knock-on effects of the European crisis, and indeed, export growth and manufacturing activity in many emerging market economies has weakened. But much of the current slowing also reflects developments that are less worrisome, transitory, or both: The deceleration of Chinese real GDP from 9½ percent growth in the third quarter to 8¼ percent in the fourth puts it on a more sustainable trajectory; Japanese GDP popped up 5½ percent in the third quarter as it recovered from its earthquake, but is on track to slow to 2 percent as that bounce fades; and severe flooding is estimated to have temporarily pushed down Thailand's GDP a whopping 14 percent at an annual rate this quarter while also disrupting supply chains for its trading partners.

Going forward, the economic growth of our trading partners outside the euro area is expected to strengthen to a solid 3½ percent by 2013 as the European crisis eventually eases. Counting in the euro area as well, however, aggregate foreign GDP growth falls from 3 percent in 2011 to only 2½ percent next year before rising back to 3 percent in 2013. This trajectory is nearly ½ percentage point below our October projection and, along with our revised forecast for the dollar, weighs heavily on the outlook for the U.S. external sector.

As Brian discussed earlier, flight-to-safety flows pushed up the dollar during the intermeeting period, and we expect further upward pressure as financial turbulence continues. Accordingly, we have revised up the path of the broad real dollar by more than 2 percent on average during the forecast period. In combination with our markdown of foreign GDP growth, this pushes our forecast for U.S. exports over the next two years from 6¾ percent in the October Tealbook to only 5¼ percent in our current forecast, a substantial revision. As a result, the contribution of net exports to U.S. GDP growth during the next two years falls close to zero in the current forecast

from positive ¼ percentage point in October. And this markdown would be even larger, had we not lowered the forecast of U.S. import growth in light of the downward revisions to U.S. economic activity. David will now continue our presentation.

MR. WILCOX.[2] Over the intermeeting period, the indicators that we use to gauge the near-term pace of spending were, on balance, reasonably encouraging. Retail sales in October and light motor vehicle sales in November were stronger than we expected, and even the incoming news on nonresidential construction was a bit more upbeat than we anticipated. However, real business outlays on equipment and software appear to have slowed sharply in the current quarter—about in line with our October Tealbook forecast—and forward-looking indicators suggest that investment spending will remain tepid in the near term. Meanwhile, residential construction remains moribund, with few if any signs on the horizon of recovery, while federal defense purchases came in lower than expected. I would also note that the data that have been published since the Tealbook closed, including this morning's retail sales, have been, on net, consistent with our expectations, and leave our GDP forecast for the fourth quarter unchanged from the Tealbook at 3¼ percent.

Our thinking in putting together the forecast was also informed by the substantially weaker news about aggregate income that the BEA published. Based on data from the quarterly census of employment and wages (which are received with a lag), the BEA revised down its estimate of second-quarter labor compensation by $40 billion. This resulted in a significant downward revision to real disposable personal income, and left second-quarter real gross domestic income, or GDI, roughly flat. Moreover, the BEA carried forward the weaker trajectory for income into the third quarter. And although—as I will discuss in a moment—the most recent labor-market report was a little stronger than we had expected in some respects, it did not point to a larger increase in wage income than we had anticipated.

Taken at face value, the lower level of personal income would point to somewhat weaker growth in consumer spending going forward. We wrestled at length with whether and if so, to what extent, we should buy into that message from the income data. In the end, displaying our own attempt at Solomonic wisdom, we split the difference, taking consumption down somewhat in response to the lower level of income but not as much as we would have done if we knew that consumption and income were measured without error. In effect, we've left some room for the possibility that households knew perfectly well what they were doing when they went out and spent at a respectable rate during the second half of this year, and that the current estimate of income will ultimately be revised up. But this judgment on our part admittedly represents a downside risk to our forecast.

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

Finally, the news about conditions in the labor market has been a little better than we had expected. The jobs numbers themselves were about what we had expected. As shown by the black line in the lower-left panel in the summary exhibit, the estimates of private job gains reported in the establishment survey have been running just short of 150,000 in recent months. A number of analysts have noted that the estimates from the household survey, shown by the gray line and adjusted to make them as comparable as possible to the numbers from the establishment survey, have been considerably stronger, on average, in the past few months. To ascertain whether this implies that the establishment survey has been understating the pace of job creation over this period, we used a Kalman filter model that treats both employment measures as noisy indicators of an underlying rate of job gains. As you can see, the model estimate—plotted as the red line—keys far more heavily off of the establishment survey than the noisier household survey. Over the next few months, we expect private payroll job gains to continue to run at about the same 150,000 pace that the model estimates have centered on lately.

The far greater surprise in the most recent labor market report came in the form of a much bigger decline in the unemployment rate in November than we had been expecting. Here again, we split the difference, taking some signal from the decline in joblessness but also suspecting that some of last month's drop was overdone and is likely to be reversed. I will come back to some of the implications of the unemployment rate shortly.

On balance, we read this mix of both positive and negative incoming news on the real economy as signaling, by itself, only a small downward revision to our previous projection for real activity. But all else was not equal, and definitely not on the European front. In particular, the deterioration in the European economic outlook that Steve discussed is now having a material influence on our baseline projection whereas before we had mostly confined consideration of that situation to alternative scenarios.

As Steve described, we are now assuming that Europe will undergo a moderate recession, and that the path toward resolution will remain sufficiently unclear to generate continued unease in U.S. financial markets through the first half of next year. These assumptions affect the U.S. economy by way of a wider trade deficit that results both from weaker activity abroad and the stronger exchange value of the dollar; heightened uncertainty in financial markets that holds down stock prices and causes risk premiums in interest rates to be wider than they otherwise would be; and a small amount of additional spending restraint on the part of households and businesses reflecting their diminished confidence. In our baseline projection, financial market stress and household and business pessimism begin to ease gradually around the middle of next year as European policymakers eventually succeed in convincing market participants and others that a viable way forward will be pursued, but we expect that spillovers from Europe to the United States will continue to restrain U.S. economic growth into 2013. Of course, even though we have made some allowance for greater transmission of financial stress to the U.S. economy

through our asset-market assumptions, there is, in our view, substantial downside risk inherent in this situation.

The other material influence on our outlook reflects a change in fiscal policy assumptions. In particular, we now assume that the Congress will extend both the employee portion of the payroll tax reduction and the Emergency Unemployment Compensation Program through the end of 2012. Relative to the October projection, these changes cause fiscal policy to exert a smaller drag on real GDP growth next year, but a larger drag in 2013 as the tax cut and unemployment benefit extensions expire. That said, you might wish to set these fiscal changes in the category of complicating distractions as you chart your policy path forward; because their effects on real activity are unwound in relatively short order, the fiscal changes have almost no influence on the prescriptions generated by our optimal control simulations.

After all the dust has settled, as you can see from the upper-left panel of the exhibit, we end up with a substantially more subdued outlook for the growth of real GDP, particularly in 2013. Nonetheless, the unemployment rate—shown in the middle-left panel, and the output gap, not shown—are essentially unrevised at the end of the medium-term projection. This combination of outcomes reflects several changes we have made to the supply side of our forecast. Specifically, in order to better square the decline in the unemployment rate over the past year with the lackluster pace of GDP growth, we trimmed our assumption for the growth of potential GDP this year by nearly ½ percentage point. And going forward, we edged down our assumption for potential by a tenth of 1 percentage point in 2012 and 2013 as well, in part reflecting the slower pace of capital deepening in this projection.

To be sure, there are a lot of moving parts in the projection, but they can be summarized as follows: We now judge the gap in resource utilization to be a little narrower now than we thought at the time of the October Tealbook, but we think the outlook for aggregate demand is yet a little more subdued than we anticipated earlier. Although this was not a design criterion in putting the projection together, the gap in resource utilization at the end of 2013 is roughly the same now as we had it in October.

The upper-right and middle-right panels of the exhibit summarize our projection for headline and core PCE inflation. The incoming inflation data have thus far corroborated the view that the bulge in core inflation seen earlier this year was largely attributable to transitory factors, including the pass-through of higher import and commodity prices and a rise in motor vehicle prices that reflected supply shortages following the March earthquake in Japan. In recent months, core goods prices—including prices for motor vehicles—have slowed markedly. In fact, we now expect fourth-quarter core PCE inflation to come in about ½ percentage point below our October forecast, though a portion of this revision reflects an unexpected decline in medical services prices that we do not expect to continue. Going forward, our projected path for core inflation is essentially the same as in October, as we have made no material revisions to the factors influencing the core over the forecast period.

Similarly, the path for headline PCE inflation in the December Tealbook is little changed from October. Headline price inflation has stepped down as the recent decline in core inflation was reinforced by a deceleration in consumer food and energy prices. We expect the deceleration in food prices to extend into this quarter and the next as lower crop prices continue to feed into retail prices. Likewise, we expect previous declines in imported oil prices to push down retail energy prices through the end of this year. In 2012 and 2013, energy prices are projected to decline slightly, leaving headline inflation a touch below the core in both years.

In previous briefings, we have shown results from a Markov-switching model that generates estimates of the probability that economic activity is moving into a so-called stall state—a slow-growth period that historical evidence indicates is often a way station along the path to a recession. This model combines data on real gross domestic income—which, according to Board staff research, provides another useful indicator of the real-time state of the economy—along with data on real GDP and the unemployment rate. As always, I would caution that one can generate a range of different results based on seemingly slight changes in the specification of the model, and that the model has generated false alarms in the past. That said, the lower-right panel presents updated probabilities from one of the specifications. As you can see, the estimated stall probability has risen sharply in recent quarters, and is markedly higher than the value we estimated around the time of the October Tealbook. Mainly, these higher probabilities reflect the downward surprises in second- and third-quarter real GDI. It is sobering to observe that, viewed through the lens of this particular specification, the rise in the estimated stall probability occurred even before the outlook for Europe took a turn for the worse. I'd be pleased to take your questions now.

CHAIRMAN BERNANKE. Thank you. Questions for our colleagues? Vice Chairman.

VICE CHAIRMAN DUDLEY. Two questions. If you looked at the estimated stall probability and put down your forecast for Q4, what would it look like? That's question number one. Question number two is the saving rate—if you look at the personal saving rate, it has declined a lot, but if you look at other measures like flow of funds, they don't show commensurate kind of declines.

MR. WILCOX. The stall probability would come down some, not a lot, because we've only got growth proceeding about in line with its potential in the near term.

VICE CHAIRMAN DUDLEY. GDI in the fourth quarter should be quite a bit better I would guess because you have inflation coming down. You have okay employment growth.

MR. WILCOX. Yes, but going forward over the next couple of years, we've got the economy expanding only slightly above its potential rate. Those probabilities will stay probably not as elevated as this, but I would suspect pretty high.

With regard to the personal saving rate, it is down. As I mentioned in my text, we have discounted that to some extent. Once we have all the data in hand and they've been benchmarked using tax returns and other sources of information that would become available only with considerable hindsight, that lower level of income would cause us to take down consumption spending by more than we did at the moment. We haven't unmoored ourselves entirely from the personal saving rate. There is measurement uncertainty as you suggest; the personal saving rate from the flow of funds accounts is higher. Discrepancies between the flow of funds account and the national income account are commonplace and can often be quite sizable. But we were loath to buy into a rigid view in reaction to those lower income numbers for a variety of reasons encompassing both model uncertainty and a recognition that the data with respect to both consumption and investment are imperfect and subject to considerable subsequent revision. We went part way, but not all the way.

VICE CHAIRMAN DUDLEY. Okay. Thank you.

CHAIRMAN BERNANKE. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. David, I think you just answered my question, but I noted in yesterday's *Wall Street Journal* two comments in an article; one, that the Federal Reserve, using a different set of data, said last week that the saving rate rose markedly in the third quarter to 7.4 percent, and the second comment was that Fed data suggest that income may be rising faster than preliminary reports from the Commerce Department. I think you just

answered that, but can you summarize what your bottom line is in trying to sort out these indicators?

MR. WILCOX. The source of those other estimates is the flow of funds accounts, and historically we've keyed our projection more off the internally consistent framework provided by the national income accounts. But we're trying to be sensitive to the fact that we're operating in a world where none of these concepts is measured with precision. It will be years until these numbers are benchmarked and settled down. Moreover, different model specifications give us different guidance about how strongly we should react to surprises in income, and for all of those reasons we were reluctant to apply a rule-of-thumb kind of marginal propensity to consume to that decrement in income.

CHAIRMAN BERNANKE. David, are there valuation adjustments in the flow of the funds that could account for some of the difference or is it conceptually consistent?

MR. WILCOX. In principle, Larry Slifman or Michael, either one or both of you, can answer—two former chiefs of the Flow of Funds Section here. In principle, one can adjust the flow of funds data to a conceptually similar basis to the national income accounts.

MR. PALUMBO. The conceptual differences are fairly small. Both of the measures are missing lots of important pieces of data. The flow of funds accounts are missing a tremendous amount of data for the third quarter. The quarterly variation in the flow of funds saving rate is even more residually derived than the national income accounts saving rate. We don't take very much signal from the quarterly pattern at all. Nonetheless, as you suggested, over longer periods of time, they move generally together. They tell similar rather than dissimilar stories. I haven't looked at a detailed parsing from the most recent data to see what was going on in the third quarter.

One of the things that is conceptually different in the saving rates is the way that the accounting of liabilities on the household balance sheet works into flow of funds saving versus the expenditure-based measure in the NIPAs. It's possible that is still driving a wedge that's making the flow of funds saving rate higher. Essentially, households are still having a large amount of debt charged off their balance sheets; that could show up as a saving concept in the flow of funds accounts, but not necessarily so in the national income accounts. But I don't think that's a third-quarter source of difference. In general, we don't put a lot of signal content on the quarterly frequency flow of funds data, especially on these early vintages where there's a lot of missing information. It's something that I generally pay only a little bit of attention to.

MR. WILCOX. Michael, to the Chairman's question, using flow of funds accounts, one can construct a measure of personal saving that strips out capital gains on equity.

MR. PALUMBO. Actually, the headline measures of the saving rates from the flow of funds accounts do not have a capital gains component in them. The only real conceptual difference is with regard to net investment in consumer durable goods, and we even show a number in the table that takes out our estimate of that bit. The other thing that can be an issue—as I think I suggested—was how the charge-offs end up being a form of saving in the flow of funds accounts. I don't think that has a counterpart in the national income accounts, but the capital gains—depending on what they are reporting, and I think they are reporting the flow of funds saving basis—is not in there.

CHAIRMAN BERNANKE. Okay. Thank you. President Plosser.

MR. PLOSSER. I want to follow on this same theme with a little different take. Particularly on the real gross domestic income side, one of the observations that we have is that certainly over the past four months—and actually longer than that—there have been substantial

revisions upward to the establishment survey employment numbers, like 250,000 jobs relative to the initial estimates. I think the establishment survey goes into calculating initial estimates of wage income, and so forth, that go into the NIPA accounts. Is there a role for the fact that those revisions have been so large in recent months? Does that feed into gross domestic income in a way that might be consistent with the fact that we are underestimating consumption, or have been? They seem to be moving in the same direction. Is there any separate linkage there into the forecast that we might be concerned about?

MR. WASCHER. That's right, there have been upward revisions to the establishment survey employment numbers, and those are used to construct the initial estimates of wage and salary income in the NIPA. For example, for the third quarter—and then for our estimate for the fourth quarter because we have data through October—we would use those to construct our estimates of personal income. It is also the case that BEA later gets estimates from the unemployment insurance tax system on basically a universe count of wages and salaries in the economy. That is the big downward revision that David referred to in Q2. There is some possibility—and this is one of the reasons we discounted some of the income surprise in making our forecast for consumption—that we will see an upward revision to Q3. The statistical analysis suggests that there is some negative correlation in the revisions, so it does seem possible that we will see an upward revision to income in Q3. Again, that is one of the reasons we did not take full signal from the downward revision to personal income.

MR. PLOSSER. I have a second question. Thank you.

MR. WILCOX. Can I summarize? The Q2 number for compensation is a pretty good number, because that is based on a universe count of employers. In Q3, the BEA has folded in everything we know, including the upward revisions to employment and all of that. We have

done the best that we can to translate all the latest information about those upward revisions in jobs numbers into the income numbers that we built into this forecast. Now, what the future may hold, of course, is anybody's guess. We have given you our guess, but we have tried to take into account all of the information.

MR. PLOSSER. It was the serial correlation part of it that I was asking about?

MR. WILCOX. Yes. I am not aware that we think there is any statistical inefficiency in the estimation procedure that the agency is bringing to bear.

MR. PLOSSER. A slightly different question. I really appreciate your discussion about Europe. Who knows whether the sovereigns will be Lucy and pull the ball away from the ECB once again. We will have to wait and see. But having said all of that, Dave, you mentioned exports, and you talked a little bit about the asset price changes and the heightened uncertainty. I would like to see if you can give me a little more quantitative measure of each of those. For example, if U.S. exports to Europe fell, your standard error of the consequence of that is probably small relative to perhaps some of the other variables that you are mentioning. Now, I want to see if I can get you to break down a little bit for me: You've marked down the forecast pretty substantially, and surprisingly a lot compared with what I anticipated. I'm trying to get a handle on what is the most important channel quantitatively and the magnitude of it. Can you elaborate a little bit on that?

MR. WILCOX. Yes. You asked me if I could break down, and I may proceed to do so. [Laughter]

MR. PLOSSER. You have such great anticipation. [Laughter]

MR. WILCOX. I'm going to air our dirty laundry. I'm going to give you a sense of precision here that will be misleading because around all of these estimates, I am just going to

give your our best guesses. We had to put a guess around all of these numbers. We guessed that the bulk of the downward weight on the GDP projection will occur in 2012. Four-tenths was what we put down as a total on the growth of GDP, and then an additional negative two-tenths in 2013, so some spillover. Even though the situation is improving, the all-clear signal hasn't been given. Now, the bulk of that is occurring through the dollar effects and the weaker activity abroad. The dollar is taking off a couple of tenths worth each year, and weaker activity abroad is taking off another tenth. Those two effects combined are worth minus three-tenths in each year. Then as a placeholder, we took another divot, the tenth of 1 percentage point for uncertainty and risk aversion in 2012. Then, we had that coming back, and so we added back in one-tenth in 2013.

MR. PLOSSER. So if you took the potential appreciation of dollar—

MR. WILCOX. But it then switches—we have already seen a substantial part.

MR. PLOSSER. No. But if you look at your standard error estimates associated with that forecast, how big is the standard error—what did you say, of two-tenths?

MR. WILCOX. Yes, at least.

MR. KAMIN. Are you talking about the uncertainty about what the dollar is going to do or the uncertainty in terms of the mapping from the change in the dollar?

MR. PLOSSER. The uncertainty of the mapping.

MR. KAMIN. Yes. We have different models, but looking at our partial equilibrium model of trade, we estimate models that link U.S. exports to foreign activity and the real exchange rate. Those models have performed relatively well in the past, but the standard error, we will have to admit, is reasonably large. It is also reasonably large in the neighborhood of large turning points in the economy. That is most relevant right now to the elasticity of our

exports with respect to foreign output, but it is probably also present in terms of the responsiveness to the dollar. Now, to amplify on that slightly, in the development of our export forecast, we decided that the standard elasticity of our exports with respect to foreign GDP basically ends up being in the neighborhood of 1 percent, although it might be a little bit larger than that because we observe that around deep recessions in the global economy trade usually falls by even more than the long-run elasticity. We have a little bit of that built in, but not too much. All told, yes, the uncertainty is fairly large.

MR. PLOSSER. Probably substantially bigger than your point estimate, right?

MR. KAMIN. You mean bigger than the contribution of net exports?

MR. PLOSSER. Yes.

MR. KAMIN. Possibly in that neighborhood, I would have to look into that. But in terms of our point estimate for exports, our export growth is going to be 5 to 6 percent. The uncertainty is not going to be larger than that.

MR. WILCOX. I would venture a slightly stronger statement: In partial equilibrium, do we think a stronger dollar is better for or worse for our trade position? I don't profess a lot of uncertainty about that.

MR. KAMIN. No, I certainly don't profess any uncertainty about the direction.

CHAIRMAN BERNANKE. Okay. A little certainty. President Fisher.

MR. FISHER. A comment, Mr. Chairman, and a question. First, the comment is how different the conversation is at this table now than under the previous regime. It was noteworthy that Steve led off the presentation, and coming full circle to the conversation we have just had.

It is wonderful that we think in globalized terms. In thinking in globalized terms, Steve, going back to your presentation, obviously, we are concerned about Europe presently, but we are

also seeing significant price declines the past two months in Chinese real estate—actually plunging sales. We're monitoring the employment in that sector informally through one of our contacts, and we are also seeing people laid off significantly in terms of the brokers. As you know, shadow banking has a huge role in the Chinese system. Most of that shadow banking, we think—we don't know—has gone into real estate. I am not going to ask for a breakdown. We can't afford to have both of you break down at the same time. But do we at least have a sense of how much impact that might have on the Chinese economy, are we monitoring it, and might it come back to bite us in some way, shape, or form?

MR. KAMIN. We are certainly monitoring that situation pretty closely, and I have to say that there are some different factors in play in terms of our thinking about the outlook for Chinese GDP growth. First, just to get this clear, we have long predicted the so-called soft landing for the Chinese economy, right? And we have frequently been surprised on the upside as GDP growth continues to be greater than we were penciling in. It's against that background that I think we have to look at future developments.

The evidence on credit creation is a little bit on the mixed side in the sense that if you just look at the standard measures of bank loan growth to China, they have certainly softened a bit from the previous year, but they are still running at around 15 to 16 percent, which is a healthy pace. At the same time, there are some broader measures of loan growth that include some of the off-balance-sheet types of items, and that seems to have slowed down a little more. That seems to be consistent with the story that, earlier on, Chinese authorities clamped down on this loan growth, and they also introduced macroprudential measures like lower loan-to-value ratios that also clamped down. We are seeing some evidence of that, in that the property market in China seems to have been taken off the boil a bit. The property prices have flattened out in recent

months. There are some mixed signals, but all told, it does look like there is some slowing in the property market.

Most recently over the intermeeting period, the Chinese authorities lowered their reserve requirement a notch, so that is like indicating that maybe they think that the tightening cycle has gone far enough. Putting all of those things together, we are looking at some slowdown in Chinese growth to a more sustainable 8¼ percent pace. Personally, I wouldn't be surprised if China surprised us again on the upside. That said, the combination of those slowing credit aggregates, plus the decline in manufacturing PMIs and the other evidence you point to, does support the view that growth is sliding.

MR. FISHER. But you wouldn't foresee a housing price collapse. You don't think they would allow it.

MR. KAMIN. First of all, we almost never end up correctly calling that event. I think it would be premature at this point to develop much certainty about that very adverse scenario, aside from the fact that all we have seen so far is some flattening of prices in recent months. Property prices in China, as measured by the 70-city survey, are still 4 percent above their year-earlier level. It is also true that the market in China is a little bit different than in the United States, in the sense that a lot less of the residential market is financed by heavy leverage or loans and a lot more of it by cash. Furthermore, in the context of a very rapidly growing economy, a little excess capacity is less worrisome than it is in a more slowly growing economy. Right now, we are not calling for a property crash that could lead to more adverse consequences. But that is certainly an important risk to the outlook in China, and if it weren't for the Europe situation, that could be getting close to the top of the list.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. The last name I have on my list is President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I have several questions here. I am going to proceed from the simplest to the most complex. The simplest one is: For real GDP we don't have a confidence bound, is that intentional or is that a misprint?

MR. WILCOX. That's intentional. I showed four-quarter percent changes for real GDP, and I showed one-quarter percent changes for both measures of inflation. And on the fly, we couldn't construct the confidence intervals correctly for the four-quarter changes. In previous editions of this, I have shown quarterly GDP growth. Because of our fiscal assumptions, there is some unseemly and distracting quarterly variation that I thought wasn't, frankly, very informative. We smoothed through that at the cost of losing our confidence interval.

MR. BULLARD. I see. So you are hiding an unseemly—[Laughter]

MR. WILCOX. I am hiding the unseemly variation in the baseline forecast because I think that is wholly irrelevant for your policy decision.

MR. BULLARD. Part of the story that you told is that some of the inflation developments earlier this year were temporary. You said that some of the energy and food price movements fed through to the core prices. In the past, we have always told the story that when those kinds of prices go up, they do not feed through to the core, and so this is not something that we need to worry about. Is this a change in the view of the staff about the pass-through to core inflation when energy prices, in particular, go up?

MR. WILCOX. I don't think that's right. Our story has been that the energy price pass-through has been small, but the import price pass-through is something that survived relatively well through the past 20 years or so of data. We had a pretty significant surge in the area of, what, 7 or 8 percent in import prices in the first half—

MR. BULLARD. —non-energy import prices—

MR. WILCOX. Yes, core import prices.

MR. KAMIN. Yes, exactly. It was 8 percent in the first quarter and 7 percent in the second.

MR. WILCOX. That was a very significant factor, we think, in driving up core goods prices in the first half of the year. I don’t think that is a change in our story.

MR. BULLARD. Well, those are core prices, so it’s not really pass-through from energy to core. They’re import core, that’s what you’re saying.

MR. WILCOX. Right, we think import prices contributed about three-tenths to core inflation this year, and energy prices contributed only about one-tenth or so. By far, the much bigger influence was on the import price side.

MR. BULLARD. And that is going to moderate?

MR. WILCOX. Yes, it already has. We think we have already seen that in core goods inflation and in motor vehicle prices, for example, in particular, which represents the unwinding of some of the supply chain disruptions that took place after the Japan earthquake.

MR. BULLARD. We were talking earlier about foreign real GDP growth, and I would like to hear more about the role of the dollar in that kind of calculation. We said foreign real GDP would decelerate from a high rate to a somewhat lower rate. Is that a PPP calculation? Is that a current exchange rate calculation? How much difference would it make if the various exchange rates go in different directions from the ones that you have talked about?

MR. KAMIN. The foreign GDP forecast that we make is based on using the real foreign GDP aggregate values for each of the economies of our trading partners. That is not converted to dollars, that is just real euros, real Canadian dollars, et cetera. For every one of our trading

partners, we have a projection of what their real GDP is and their real GDP growth. Then, we take those growth rates, and we basically aggregate them up, weighting by their shares in U.S. trade. In that way, that calculation is purely separate from any consideration of exchange rates, except insofar as the trade weights that we use are based on the current dollar value of our trade with them. We have a more or less exchange-rate-free measure of foreign GDP growth, and that has a particular effect on our projection for U.S. exports. Then, separately, we have a measure in our models for the value of the U.S. dollar converted into real terms using our and their CPIs, and that represents basically the trade competitiveness channel. We have both of those measures in our model.

MR. BULLARD. Thank you. And, finally, on these regime-switching models on page 1 of the handout, the bottom right has an estimated stall probability of about 50 percent right now. My sense of this is that there are a lot of regime-switching models that try to estimate recession probabilities. All of the ones I have seen have much lower probabilities than this one. Of all the models that you could present to the Committee, you have chosen the one that has the very highest probability. What is it about this model that says that it is a better model than the 10 others that are out there that have been published and have established track records?

MR. WILCOX. I completely agree with you. The different specifications, as I had mentioned in my text, can deliver different results. It's simply not the case that this is the specification that delivers the highest probability.

MR. BULLARD. I'm sure you can construct one.

MR. WILCOX. We can deliver to you a probability of 100 percent. I would make two claims on behalf of this specification. One is it puts quite a bit of weight on GDI, and we have a pretty solid body of research done by staff members now that points to the signal value of GDI in

helping to home in on the underlying state of real activity, and some preliminary work suggesting that GDI is more helpful in that regard than early estimates of GDP. They are both, after all, attempting to measure the same underlying concept, and so it's an empirical question as to which might be more informative, and this body of work suggests that a pretty good case can be made on behalf of GDI. The second claim I'd make on behalf of this model is that it is the same specification that generates the red line. So the simple message I'm telling you is that there is a middle-of-the-road specification of these models that keys off the much weaker trajectory for GDI in the second and third quarters and arrives at a conclusion that the underlying thrust of the pace of activity remains quite tenuous.

MR. BULLARD. Thank you.

CHAIRMAN BERNANKE. Thank you. Why don't we turn now to our economic go-round, and I have first on the list President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. Since the November meeting, the data have mostly surprised positively to the upside, and the economic environment feels better, but despite somewhat better-than-expected incoming data—and I would add the tone of reports from Sixth District directors and contacts—I have not changed my outlook from the November FOMC submission.

As regards to directors and contacts, they're saying that business is good, but they also don't seem to be buying it yet as a trend. My baseline, which is broadly in line with the Tealbook through 2012, sees GDP growth next year at around 2.7 percent, inflation contained at or below the Committee's 2 percent objective, and unemployment continuing to decline slowly, notwithstanding the recent sharp fall in the household survey. In short, a pretty much mainstream outlook of moderate expansion.

The key restraining factors that are materially influencing this outlook are three in my mind. First, the situation in Europe constitutes both a factor incorporated into my forecast for the real economy in the near term and a downside risk. I think the discussion in the Tealbook does a nice job of distinguishing among the export channel, the asset price channel, and the financial linkages channel. The export channel effect seems to be already largely baked into the outlook. The asset price channel effect and the prospect of severe financial market disruption propagated through financial linkages are more contingencies in my mind and, therefore, part of the balance of risks equations.

Second, we continue to hear the repeating theme of uncertainty and its companion theme, weak business and consumer confidence, as a restraining force on the recovery. Whether or not the times are actually more uncertain than in the past, our contacts clearly think they are. To gauge the current uncertainty mental map, if you will, in our District, we polled our 44 directors and other District contacts during the intermeeting period on the question of sources of uncertainty influencing business decisions. Two uncertainties dominated: economic performance, defined as the sustainability of demand; and economic policy, and this being mostly nonmonetary matters such as regulation and taxes. Other unknowns, such as global economic and financial conditions (you can read that as Europe), credit availability, and health care costs seem to be considerably smaller influences on current decisionmaking. I think it's realistic to conclude that the uncertainties that are contributing to a conservative approach to investment in fixed capital and labor are likely to be part of the economic picture for quite a while.

A third factor is the lattice, you might call it, of recognized conditions and structural elements that are or likely will be drags on growth in employment. These include housing sector

factors like home prices, construction activity, and continuing foreclosures; fiscal drag; labor market dysfunction; weak income growth; and PCE growth, drawing on a saving rate that may not be sustainable.

Because of the tenuous character of the current situation, I give more-than-normal attention to the downside alternatives laid out in the Tealbook. The "European Crisis with Severe Spillovers" scenario continues to be plausible. I am less concerned about the "Homegrown Recession" scenario absent a shock from Europe. The "Further Disinflation" scenario cannot be dismissed, given the apparent global slowdown and the current limitation on the potency of monetary policy. I perceive downside risk to the economic growth outlook. For now, I'm holding to the view that the risks to the inflation outlook are balanced. The "Further Disinflation" scenario frames the downside. On the upside, I'm taking into account my District's most recent business inflation survey that reveals a growing concern about price pressure from labor costs.

To summarize, momentum in the economy seems to be building, but the outlook is really very cautiously positive. There are a number of restraining forces already detailed. I see downside risk to economic growth and the inflation risks as roughly balanced. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. Overall, the economic conditions in the Third District and the nation have improved somewhat over the intermeeting period. Preliminary anecdotal reports on activity from our business contacts since late November have been somewhat encouraging. Several private-sector forecasters revised up their forecasts for fourth-quarter GDP growth in light of the better-than-expected data.

Manufacturing activity in the Third District continued to expand in November and December. Our business outlook survey rebounded into positive territory in October after two months of negative readings and remained positive in November and now December. The December readings, which remain confidential until Thursday morning, will come out, and they indicate a further pickup in the general activity index from the November reading of 3.6 to 10.3 in December. The market expectation is for a number like 5, and it's going to be 10.3. The new orders index showed a significant increase. Shipments remain positive as well. Expectations for future activity, which rebounded significantly in November, increased again in December, suggesting that business sentiment is turning somewhat more positive.

District labor market conditions improved in October, our most recent data for the District. Employment in our three states grew modestly in October, though at a rate somewhat slower than the nation, but the unemployment rates moved down in our three states to an average of 8.5 percent. In Pennsylvania, the unemployment rate is 8.1; Delaware, 7.9; and only New Jersey, which has a rate of 9.1, exceeds the national average at this point. Thus, while there are signs of improvement, I expect we'll be in a pattern of two steps forward and one step back in the labor market for some time to come.

On the national level, I was encouraged by the relatively strong November employment report, in particular, the string of upward revisions we've seen in the payroll survey over the past several months. Since July, the upward revisions alone have added 240,000 jobs to payroll employment. Indeed, analysis of the nonfarm payroll employment revisions by staff at Philadelphia's Research Department and the Real-Time Data Research Center has found that over the period from 1964 through September of 2011 initial estimates of job gains are biased downward by nearly 18,000 jobs. That is, over the entire sample, the average revision from the

initial estimate to the estimate that the BLS releases two months later is 18,000. Moreover, there appears to be a statistically significant positive bias over the most recent expansionary period. In particular, from the period July 2009 to September 2011, the average revision to the initial estimate of job gains is 36,000 jobs per month. This may be a sign that we're underestimating the personal income data, too, as I was asking Dave earlier. We probably should take this possibility into account in our future forecasts. This might explain why consumer spending seems to have held up better than many of us have expected, given the weak labor markets.

My outlook for the national economy really hasn't changed much over the intermeeting period. I was a bit more positive than the staff in the last meeting. As I said earlier, I was somewhat surprised by the further markdown in the Tealbook forecast. The more positive data suggests to me continued moderate and gradually improving labor market conditions over the forecast horizon.

Although I don't see inflation as much of a risk in the near term, my inflation outlook is less sanguine than the Tealbook's is for some time. I believe there are risks of higher inflation in the medium term. Inflation has come down in recent months as oil prices have fallen, but recently, oil prices are back up again, suggesting we may see upward pressure on inflation once again. The price index in our business outlook survey is coming out on Thursday, and those price indexes are up as well in December. The prices paid index jumped from 23 to 34, and the prices received index jumped from 2.6 to 12. I think this Committee is going to have to be vigilant in this environment to keep inflation expectations anchored.

The European fiscal situation looms large, as we've been discussing, as a risk into this roughly benign outlook, but it isn't clear to me how the European situation will play out. Financial market ramifications are also highly uncertain. One risk, of course, is that we could

have a so-called Lehman-style event where investors pull away from all counterparties and the markets freeze up. However, it could be that if the situation in Europe worsens, we see a rapid flight to U.S. Treasuries as a safe haven. This might impose some disruptions, including an appreciation of the dollar as we've been talking about, which would dampen net exports, but that probably would be quite a different problem than what we saw and experienced in 2008.

So far, U.S. financial institutions have been able to access short-term funding markets on mostly normal terms, and large borrowers in Europe appear to continue to have access to bank funding. Indeed, one very large U.S. bank with a strong presence in Europe reports that while European banks are pulling out of some syndicated loans, it has been relatively easy to find U.S. banks or non-European foreign banks to replace that lost funding. Smaller European borrowers may have increased problems in securing funding, as European banks continue to try to increase their capital ratios. However, this may actually increase opportunities for U.S. banks operating in Europe as they try to increase market share by knocking on doors and taking customers away. We certainly have to remain vigilant to developments in Europe, there's no question about that. That said, I don't see a need for us to move preemptively to stave off problems, and the recent actions taken in Europe give me more hope that the European situation will actually muddle through and stabilize, and we'll be able to avoid the most dire outcomes suggested in the Tealbook's alternative simulation.

My modal forecast for the U.S. is that the economy will continue to grow at a modest pace with some acceleration to somewhat or slightly above-trend growth in 2012 through 2014. With the moderate pace of growth over the horizon, labor market conditions will gradually improve. I anticipate that inflation will fall and be around our 2 percent goal over the near term, but that forecast is predicated on inflation expectations remaining well anchored, which will

likely mean that the Committee will need to commence policy tightening well before mid-2013. I remain concerned that we have taken steps that actually create substantial risks of higher inflation in the medium term if things don't go just right for us. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Williams.

MR. WILLIAMS. Thank you, Mr. Chairman. The U.S. economic data since our last meeting have been encouraging. Car sales and auto production are up. Holiday sales are running above expectations, and consumer sentiment, although still depressed, has rebounded. The labor market continues to improve, and the unemployment rate has declined. While the recent U.S. data have brought us some holiday cheer, I'm afraid that Europe is playing the role of the Grinch who stole Christmas. [Laughter] The euro area is tumbling again into recession, and the European debt crisis lurches on.

These events cast a pall on the otherwise upbeat news we have on the U.S. economy. As David Wilcox mentioned, real GDP growth looks to be around 3¼ percent this quarter, and I wish such a pace of growth could be sustained next year and further on, but there are a number of reasons to doubt that. For one, it's important to remember that some of the recent strength in spending and output is a rebound from very weak growth in the first half of the year. It's helpful to me to look at the four-quarter growth rate, and even with a strong Q4, we're still looking at 1.7 percent growth in 2011, Q4 over Q4. It's also important to remember that much of fourth-quarter growth is coming from inventories and net exports, neither of which are likely to contribute so much to growth going forward. As we've already discussed at some length, income measures continue to disappoint. GDI grew at an annual rate of less than ½ percent in the third quarter, and the recent personal income data suggest ongoing weakness. In particular,

labor compensation has been tepid, and consumer expectations of future income growth remain extraordinarily pessimistic.

All in all, I expect real GDP growth to be 2¼ percent next year, consistent with the Tealbook. The risks to this forecast remain tilted to the downside. The Tealbook and my forecast assume that the payroll tax cut will be extended for 2012. Should that not occur, disposable income would come under further pressure. GDP growth in my forecast would end up being close to trend in 2012.

And like everyone, I'm very concerned about the situation in Europe, which could spin out of control at any moment. But even if Europe doesn't blow up, we still face a number of significant headwinds, and one of those is uncertainty, as President Lockhart commented, and I hear very much the same remarks from my directors and business contacts. By almost any metric, uncertainty is elevated. Businesses are uncertain about the economic environment and about the direction of economic policy—again, exactly consistent with President Lockhart's comments. Households are uncertain about job prospects and future incomes, and the looming crisis in Europe only adds to the prevailing angst. I repeatedly hear from my contacts that these uncertainties are prompting them to postpone large capital investments and delay more permanent payroll expansion. As one of my contacts put it, uncertainty is causing firms to step back from the playing field.

But a key question for monetary policy is whether this rise in uncertainty should be viewed primarily as a shock to demand, which monetary policy should lean against, or a shock to supply, which monetary policy should not respond to. To address this issue, my staff examined the quantitative effects of uncertainty on the U.S. economy using a standard vector autoregression, or VAR, framework and several measures of uncertainty taken from the research

literature that I think are related to what we hear from our business contacts. We included in the analysis the VIX, an index of policy and regulatory uncertainty that's been taken from recent research literature, and responses from the Michigan consumer survey about factors that consumers or households themselves say are restraining their buying.

If uncertainty shocks primarily affect supply, then one would expect both unemployment and inflation to rise following an adverse shock to uncertainty. However, if these shocks primarily affect demand, then unemployment should rise but inflation fall in response to an adverse shock. According to our analysis, over the past 30 or so years, uncertainty shocks of the type that we currently face and we talked about, have acted on the economy like adverse aggregate demand shocks. That is, in these models, following a shock to uncertainty, expenditures on consumer durables and investment, short-term interest rates, and inflation all fall, while unemployment and corporate bond spreads rise. This basic finding holds across all types of uncertainty that I've already mentioned, including financial market, policy and regulatory, income, and demand uncertainty.

The second headwind is tight credit. Although we've seen improvements in credit conditions, especially for households, small business lending remains an area of weakness. As noted in the Tealbook, much of this weakness reflects a lack of demand associated with weak growth in the economy and a small pool of qualified borrowers. The supply issues, including supervisory pressures, have also been part of the story. Now, the good news is that our CDIAC members say that broad supervisory pressures have eased this year and are no longer affecting the lending decisions of healthy banks. The bad news is that a large number of community banks are not that healthy. My staff examined the community bank data and confirmed that small business lending of banks with CAMELS ratings of "3" or worse continues to decline, and

because many small businesses rely on banks with which they have long-standing relationships, finding alternative sources of funding may be difficult. This suggests that a carryover from the financial crisis continues to impinge on the availability of credit to many small businesses.

Now let me turn to inflation. Inflation pressures seen earlier this year have clearly abated. Indeed, recent data are coming in below expectations. Six-month annualized changes in overall, core, and trimmed mean PCE prices are now all below 2 percent and heading lower. Compensation growth is still soft, and labor cost pressures are basically nonexistent. My forecast for inflation hasn't changed since our last meeting. I continue to expect PCE inflation to be about 1½ percent both next year and 2013.

In summary, after a rough first half, the economy has for now returned to a moderate growth path, which will nonetheless deliver frustratingly slow progress on unemployment. Inflation is low, and inflation expectations are well anchored. If, however, Europe's troubles deepen, our recovery could be derailed and deflationary pressures could reemerge. Thank you.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. The data this fall have been somewhat more positive than I expected, in part because of the diminished expectations created by the weak data we received over the summer. Like the Tealbook, I see an extended period of only moderate growth that is insufficient to significantly reduce the unemployment rate or prevent the PCE inflation rate from undershooting 2 percent inflation over the medium term.

The discussions with businesses in my district are quite consistent with this forecast. Most businesses are seeing moderate current sales and hoping to see modest increases over next year. However, along with uncertainty about the durability of the domestic private recovery, the uncertainty in Washington and Europe makes them acutely aware of the downside risks to their

outlook, and they are delaying investment and employment decisions until the outlook is clearer. The modest hiring by small businesses and the weak small business lending noted in the Tealbook are consistent with my discussions with community bankers and small businesses. I am increasingly hearing that to make risky small business loans in this environment will take a more energized effort by the Small Business Administration. Businesses are not reporting wage or price pressures, and most businesses have reported overwhelming applications when business expansion requires hiring additional workers, despite New England performing better than the rest of the country.

I find very few academics or financial market participants who expect the European situation to be a problem only in the near term. An academic from a prestigious economics program highlighted that there is an internal office pool on when the first country leaves the euro. And there is no money on "never," though I would note that it is difficult to see just when "never" would pay off. [Laughter]

Financial market participants are reporting increased attention to counterparty risk. They are particularly reducing their exposure to French banks and are taking a hard look at U.S. broker–dealer organizations with elevated CDS spreads, including Jefferies and Morgan Stanley. While the Tealbook discusses some of the European linkages to the U.S., I would add a few more that are hard to capture in standard models, should things progress unfavorably. First, I am concerned that the broker–dealer model of financing might not survive a severe European shock. This is one reason why a company like Goldman Sachs has such an elevated CDS spread. Were a crisis to occur, financial institutions would quickly abandon counterparties with risky funding strategies. As we saw in the earlier crisis, even secured lenders run from troubled counterparties. This poses a significant risk to any firm that has a large broker–dealer.

Second, I have spent time at previous meetings discussing risks with funding structures that are not supported by domestic capital, such as money market funds, non-2a-7 funds that operate like money market funds, and foreign branches. All of these structures would be severely challenged in a crisis.

Third, I want to amplify on something that was mentioned only briefly in the Tealbook. The asset-backed commercial paper market is stressed. This market has declined dramatically from levels before the crisis to a market that is now a little over $320 billion. Nevertheless, it has been an important market for securitizing short-term commercial paper. It is also a market that has had a significant European presence. European banks have sponsored a surprising number of conduits and often provide liquidity support. Liquidity support entails serving as an alternative funding source in the event a conduit is unable to issue new asset-backed commercial paper—a constraint that many conduits associated with European banks are currently facing. Consistent with this concern, asset-backed commercial paper maturities have declined and rates have risen. This is another example of a financing structure that might not survive a European crisis and could cause a tightening in U.S. markets.

The baseline outlook is sobering, but increasingly the more severe European outcome is becoming part of the baseline forecast rather than a stress scenario. The Tealbook highlights that we will likely miss on both elements of the mandate. Should Europe worsen, as in the alternative scenarios, disinflation or deflation is quite possible, implying that we very significantly miss on both objectives. Now is the critical time, both to shore up our financial institutions, but also to promote as much growth in the economy as possible. Thank you.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. By the way, Happy Birthday, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you very much.

MR. BULLARD. I hope you are having a fun day.

CHAIRMAN BERNANKE. I wouldn't want to be anywhere else. [Laughter]

MR. BULLARD. The Eighth District economy continues to expand at a modest pace according to many District contacts. Retail sales seem to have been reasonably robust during the first portion of the holiday season. I was impressed that even smaller stores in relatively remote locations report an unexpected upswing in sales. Retail contacts have expressed a fair amount of optimism for the season as a whole. Larger retailers also seem to be doing well, but expressed more caution in interpreting the data collected so far. While major retailers are up this year, some are down or flat as opposed to last year at this point when all major retailers were experiencing increased sales on a year-over-year basis. Still, cautious optimism prevails among this group as well. Transportation industry contacts seem to, likewise, feel that the business associated with the holiday season is brisk, although perhaps not showing the large gains experienced in 2010. Some slowdown from Asia has been noted, although an important fraction of that may be due to year-over-year comparisons. Capital spending plans for 2012 remain on track. District land prices are up substantially from last year. Farmers are using land as collateral to buy new equipment. Demand for new equipment remains very strong.

Turning to the national economy, I found the Tealbook overly pessimistic on the prospects for the U.S. It is more downbeat than most private-sector forecasts. Certainly, the risks from Europe are real and substantial, but those are still overweighted in my view. I do not expect clear resolution in Europe, but I think the probability of outright meltdown is low. The

EU will ultimately stand behind its financial system, and the banks in particular. They will nationalize banks if necessary, but will not do so unless forced to. On the question of outright debt default by European nations, markets have already factored in a significant probability of debt restructuring for some countries, and I don't think it would be a surprise to see some restructuring going forward as this event plays out. I do not think that either of the scenarios that were mentioned by the staff, either that a major bank fails in Europe or that a major debt restructuring surprises markets in a way that causes global markets to freeze up, are that likely. I admit that there is some probability there, and it is an uncertain situation, but I still think the probability of outright meltdown is low.

The much more likely scenario is a long period of tumbling along and trying to create better policy responses than have been put together so far. Accordingly, a reasonable forecast would call for above-trend growth in the U.S. next year, noting the downside risk given the situation in Europe. But above-trend growth need not be rapid growth. The Tealbook has marked down the estimate of potential growth, but not nearly far enough, in my view, given the recent experience in the United States. I will call your attention, in particular, to the figure in the middle of page 22 in the Tealbook A, "Potential and Actual Real GDP." Because you don't have it in front of you, I will describe it for you. It has a potential growth line that goes through the peak of 2007:Q4 and extends the trend that existed at that time out into the indefinite future, and it has actual real GDP growth falling below that trend and remaining below that trend out to the end of the forecast period. I think that this is an unreasonable interpretation of the U.S. data. It is unreasonable to interpret the peak of the housing bubble as an economy just at potential, and that everything that has happened since then is a falling off from that level of output. In

particular, it was a housing bubble. Surely this means that there was some notion of an artificial element to the growth that occurred, especially in the 2006 to 2007 time frame.

Instead, we should interpret the peak of the housing bubble as well above trend growth and, therefore, mark down our estimates of potential growth going forward to more reasonable levels. This is what will happen over the coming years if growth remains as slow as it is projected to be around this table. Economists' estimates of potential growth will be slowly ratcheted down until they better conform with reality and move through the middle of the black line in this picture instead of always above the black line in this picture.

In the meantime, both unemployment and inflation during the last year have moved in ways that seem inconsistent with the notion of an output gap as large as suggested by the Tealbook estimates. As the Tealbook notes, while unemployment remains very high, it has come down more rapidly than expected in the past year. One benchmark for thinking about this is the behavior of unemployment following the most recent two recessions in the United States. I would not look at earlier recessions. Those occurred 30 or more years ago—too long to provide meaningful comparisons given the extensive changes in the labor market in the past three decades. What happened after the 1990–91 recession and the 2001 recession regarding unemployment? Both of these were viewed as jobless recoveries at the time and still are today. In both cases, essentially no progress at all was made on unemployment during the first two and a half years following the end of the recession. That is, the unemployment rate two and a half years after the end of the recession was essentially the same—within one-tenth of 1 percentage point—as the unemployment rate at the end of the recession.

We are currently two and a half years past the end of the 2008–09 recession. Unemployment has dropped almost a full percentage point despite what we perceive to be a very

large output gap. This should not be happening, according to conventional models, especially given the experience following the 1990–91 and 2001 recessions, which indicated major structural change in the labor market relative to the earlier era.

Inflation over the last year tells a similar story. Last year at this time inflation readings were low and appeared to be falling further. Market measures of expected inflation were also low and projected inflation to remain low. Our asset purchase program changed expectations and sent actual inflation higher. Both core and headline inflation today are running at higher rates year over year, closer to target or above our implicit inflation target in some cases. Again, this should not have happened according to conventional models based on a very large output gap.

I conclude that we should consider revising our estimates of potential growth downward more aggressively. The overly generous gap measures are distorting our view of the economy and what is most likely to happen going forward. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. There have been several notable developments since our last meeting, but they have not fundamentally changed the basic outlook. First, economic growth over the next few years still seems unlikely to be strong enough to make sufficient progress on reducing resource gaps. And, second, inflation seems most likely to run below 2 percent, what most of us would consider price stability. If monetary policy were as extraordinarily overaccommodative as some say, inflation and inflation expectations should be much, much higher, especially in the aftermath of the large relative price shocks earlier this year.

Let me repeat the familiar list of headwinds. Households are deleveraging. Median income has fallen 7 percent in the past 10 years, and on top of this decline, future income

prospects are poor. Overall net wealth has greatly diminished since the financial downturn. State and local governments have tightened their budgets dramatically, so that public-sector employment has fallen substantially. And, of course, the housing market continues to struggle with excess supply and the weight of the foreclosure crisis.

Put this all together and it is clear to me that the American consumer will not be the engine of growth for the U.S. economy, much less the global economy. In this context, some of the recent developments in labor markets have been a little surprising. I hope that the significant drop in the unemployment rate is a harbinger of further good news, but there are serious reasons to doubt that. Half of the decline in the unemployment rate last month was due to a drop in labor force participation to a level even further below its long-run trend. Consequently, overall labor market slack probably didn't fall by as much as a four-tenths drop in the unemployment rate would normally indicate. I can't argue with the Tealbook's assessment that the labor data are consistent with a lower potential GDP than we previously estimated. I wouldn't go nearly as far as President Bullard was just suggesting. But even after accounting for these adjustments, there still appears to be a massive output gap.

Next, consider the darkening economic clouds that are settling in over Europe. Twenty years after the Maastricht Treaty, Europe has apparently decided to address their imbalances crisis with Maastricht, version 2.0. Stronger and arguably more enforceable fiscal guidelines with penalties for recalcitrants will lead to greater austerity and a deeper recession in Europe. They have announced no fiscal transfers from the strong to the weak economies. In the United States, a variety of automatic fiscal stabilizers dampen the blows that individual states take during downturns. And there appears to be no credible mechanism to redress the trade imbalances that exist among the euro countries. Germany has a large trade surplus, and the

periphery countries have trade deficits. These trade imbalances are far more important, at least for Spain and Italy. Without some other adjustment mechanism, the only way for the deficit countries to improve their competitiveness is through wage cuts, which are not likely to happen without a significant recession. This was the same challenge countries faced while on the gold standard in the 1930s. Without better prospects for economic growth in Spain and Italy, this is unlikely to end well for Europe or the United States. After considering all of these issues and more, we see the U.S. output gap and the unemployment rate staying high through at least 2014, like the Tealbook does.

Meanwhile, price pressures continue to decline pretty much as most forecasts anticipated they would. The oil and commodity price increases that caused the jump in relative prices earlier this year have run their course, and in many cases are reversing, given the weaker outlook for global growth. In line with this, several of my contacts noted that their input costs were running below the forecast they had made earlier in the year. Contacts also had little concern with labor costs. While there are a few hot occupations—I often hear that certain kinds of engineers are in great demand—firms do not foresee big wage increases for the vast majority of their workers. We even hear scattered reports of nominal wage cuts, including for some in the public sector. This seems consistent with the recent average hourly earnings and ECI data, which have come in pretty soft lately. Given these developments and inflation expectations that remain at the bottom of their recent ranges, I expect inflation to come in below 2 percent over the forecast horizon.

When I put together our economic growth and inflation projections, I don't see much that has changed for me with regard to the big picture. And in fact, listening to some of the commentary and the questions about the Tealbook, I was reminded that the modal complaint about the FOMC forecast during this entire time has been that we were overly optimistic, and we

appear to be willing to repeat more of that, at least as I interpreted the questioning. I agree with President Williams's analysis that it seems that uncertainty is more due to demand than supply, although I had not reviewed that evidence. That was nice to see. I think we are still left with work to do on the policy front to improve growth prospects in the U.S. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you, President Evans. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. The economic data have continued to come in a little better than I was anticipating, but the environment for growth next year still looks very challenging with critical risks for both the international and domestic outlooks. Under the circumstances, I left the basic contour of my forecast for GDP growth unchanged, but I did lower my projections for output and inflation. That leaves me with an outlook fairly similar to the Tealbook. I have real GDP growth for 2012 at 2½ percent and growth for 2013 at 3 percent.

Like others, I was surprised by the large dip in the November unemployment rate. While some of this dip was driven by a decrease in labor force participation, some portion also reflected a meaningful gain in employment, as measured by the household survey. As David mentioned in his remarks, compared with the payroll survey, the household survey has been showing stronger employment gains for the past few months. We have seen many episodes in which the payroll and household estimates deviate from one another for a while, so I am not placing too much stock in the household survey just yet. What is more important is that even at the stronger pace of employment growth that is embodied in the household numbers, it would still take a long time to recover the jobs lost during the recession and even longer to get the employment level up high enough to absorb the expansion of population over the past few years.

A number of headwinds are still holding back the pace of recovery, as others have mentioned. And while I have commented on this issue before, and Presidents Lockhart and Williams have already noted, my business contacts do continue to emphasize that in the current environment uncertainty is importantly affecting their decisions. They suspect that a large decline in European economic growth would directly affect demand for some U.S. products. More worrisome, however, is their concern that a European crisis could shatter U.S. consumer and business confidence at a time when many people thought we had finally come safely off the bottom. In addition, uncertainty over health care reform, tax policy, and energy policy are causing businesses, especially hospitals and energy companies, to hold back on spending initiatives.

Small businesses are obviously feeling the effects as well. The Tealbook had a nice summary of small business hiring patterns, which suggests that tight financing conditions are hampering hiring at small businesses and new businesses. Our research at the Cleveland Fed clearly shows that declines in real estate valuations have made it more difficult for borrowers to meet collateral requirements. But in more recent work that is being done by my staff using the NFIB data, they found that increases in measures of economic policy uncertainty predict reductions in the expansion plans of small businesses, and we are currently in an environment of heightened policy uncertainty.

Turning to the inflation outlook, I have adjusted down my PCE inflation projections. I now expect both core and headline inflation to dip below 2 percent in the first half of next year. Behind these projections are softer incoming inflation data for a broad range of goods, commodity prices that are no longer trending higher, and ongoing restraints in labor compensation. The latest GDP release revised labor compensation sharply lower. It is now

evident that compensation growth has remained quite low in recent months, even while labor productivity growth has recovered. Such an environment, combined with competitive product markets, should keep inflation low. We may need to start paying attention to how much inflation slows. For now, inflation expectations appear to be stable and remain below 2 percent for more than a decade.

In summary, the economy is still making gradual progress, but it is fraught with fragility. Europe's crisis keeps extending further and further, both in terms of the calendar and the map of Europe. As Europe's problems continue, our own situation looks more worrisome. For that reason, I judge the risks to growth to be primarily to the downside, while the risks to inflation remain balanced. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. It's 10:30. I understand that coffee is ready, so why don't we take a 20-minute break? Thank you.

[Coffee break]

CHAIRMAN BERNANKE. Why don't we recommence? I will start with President Fisher.

MR. FISHER. Thank you, Mr. Chairman. I want to make sure Mr. Rosengren can hear me because he was complaining earlier. I'm not sure he wants to hear me. [Laughter] Our District has been very fortunate this year. We had decent job creation: 242,000 private-sector jobs were created; after subtracting government, a total of 186,000 jobs were created. We grew at a 2 percent rate in 2011. Our regional indicator suggests that our economy has slowed moderately in the Eleventh District since our last meeting, mainly due to weakening in the government sector—in particular to school teachers where we've had a contraction—and in our manufacturing sector. About one-fourth of our manufactures go to exports. Weakening of

foreign demand and a strengthening of what we calculate as the "Texas dollar," which is the dollar weighted by whom we export to and import from, has had a net damping effect on exports.

I'm going to spend my comments time, Mr. Chairman, not signaling any direction in policy, but rather reporting what I'm hearing from my corporate contacts. Again, for what it's worth, I did a particularly deep dive this time with the broader group of CEOs, big and small, public and private, and I thought I would report on that to the Committee.

My CEO interlocutors report slightly improved final demand since our previous meeting in almost all sectors. The one exception would be home furnishing, which remains a laggard. Indeed, according to the major credit and debit card processors I visit with, ex auto and ex gas—we all know that auto, as reported earlier, has been fairly robust—sales paid by credit and debit cards were up 7.4 percent year over year in November. That's the highest year-over-year gain in five years. October was up 5.3 percent, September was up 7.1 percent. Ten of the 11 sectors that the credit card industry tracks performed positively in November, and my soundings with the CEOs of the truckers and the rails, the air carriers and express shippers—and this is not just in my District, this is nationwide—all reported improved volumes in the U.S. in November and during the intermeeting period.

That said, there is, as others have noted, some anxiety about the Christmas season and the future. Most consumer-oriented companies I talked to—including theme parks and entertainment, and broadcasters (the latter basing their projections on ad bookings)—believe that Christmas will be weaker than originally projected. Nevertheless, among retailers there is some anxiety about stocking. Confirming this, the largest express delivery company now reports a backlog in trans-Pacific shipments for inventory replenishment. The largest trucking firms remark that inventories are very lean and restocking is taking place.

As to pricing, consumers are staying, in the words of one of my interlocutors, "very surgical." They are value driven on most needed goods. They're resisting the price increases that branded products continue to push. I find one of the more interesting examples from one of the largest food distributors is that there has been a substitution of tuna for beef, given high beef prices, in order to provide protein, and it's a marked and measurable one. Many of my interlocutors now expect price rollbacks in 2012. On the agriculture price front, the large producers feel that the bubble was pricked in September, and given the yields expected from expanded crop planting relative to projected demands, expect the price relief of the past three months —you can see it on every commodity chart—to continue well on into 2012. That fits with what Mr. Wilcox was telling us earlier in his briefing.

As to nonnecessities, electronics are the stuff of great consumer demand. Apple is reported to have accounted for 10 percent of the nation's sales volume for the four days surrounding Black Friday. The telephonic companies report consumer sales running 8 to 9 percent year over year relative to the previous holiday season. Wal-Mart sold 1½ million televisions in a 24-hour period on Black Friday. Electronics still seem to be leading the consumption sector.

Capital is widely available and attractively priced. Customers are paying on time. My contacts confirm that cash flow is at a record high both in absolute terms and as a percentage of GDP. It's 47.4 percent, if memory serves. That's a function of very strong profits and increasing depreciation, including the bonus depreciation that has helped so much.

My small, nonpublic contacts confirm what the NFIB data show—and incidentally, there are two good reports out by Dunkelberg this morning—which is that they're not worried about access to funding. Smaller businesses, while the big guys remain concerned about their cost of

doing business, are "sickened" by the political process. I should add here in my most Jesse Jacksonian rhetoric, "The bile applies to both sides of the aisle." They're happy with neither side. They remain focused on achieving greater productivity. They're hiring selectively and sparsely, but with a slightly improving pace. They're hoarding cash, partly to hedge against possible tax, health care, and other cost increases, including pension funding. They're generally refraining, but not totally, from cap-ex that would ordinarily result from the high profits and cash flow numbers we're seeing, until the rules are clarified. In the meantime, they're still using their cash to buy back stock, enhance their dividend payouts, and improve their debt structures.

One surprising thing was that the homebuilders report that land prices in areas where housing is feasible across the United States, not just in the Eleventh Federal Reserve District, may be beginning to creep up, indicating a possible turn in the housing market, however faint. Emphasis is on the possible, though some are looking to build again, and when I asked where the financing was coming from, the ready answer was from hedge funds and other nonbank sources.

The CEOs that I speak with that operate internationally report a slowing in Chinese growth, but not in Chinese operating costs, which are still running on the order of 15 to 20 percent when labor, other government-imposed costs, and renminbi factors are taken into account.

The credit card companies importantly, or at least interestingly to me, report a very marked slowdown in demand growth in Brazil and Mexico. As to Europe, the best comparison I got actually came from one of our staffers, Mark Wynne, who reminded us that the Catholic Church has a saint named Saint Willibrord who is the patron saint of convulsions, and there's actually a procession in western Luxembourg where they proceed every year, and they take two steps forward and one step back, and I think this is the pace at which we seem to be proceeding

with Europe. All of my contacts are concerned, but can't quantify the impact that Europe is likely to have, and they are reporting a compression in European sales. One suggestion—I'm sure it was tongue-in-cheek—is that Greece leave the EU and join the SEC football conference. That would increase their revenues [laughter] and help them balance their budget. Thank you, Mr. Chairman.

MR. PLOSSER. They couldn't afford a coach. [Laughter]

MR. FISHER. That's right, or to pay the college players what we pay them. One other thing, Mr. Chairman, that I would like to work in here, and we could talk about this at another time, but I remain deeply concerned that we could have a significant correction in stock markets. If you go back to the pre-Greenspan years, and you look at the 10 bubbles that later were burst, it typically takes 14 years to recover the old trend. Quickly looking at those 10 episodes, if that were to occur presently—and we have surely been of assistance, through your administration and through Chairman Greenspan's administration, in moving quickly enough to have an impact on equity markets—my personal calculations are that we could easily go back to 800 on the S&P. There are very few money managers who have lived through any one of those 10 periods, which means mistakes can be made, perhaps tripped off by an exogenous shock, which may occur from China while we're looking at Europe or may occur from Europe, whatever it may be. Again, I'm very concerned that we don't have overt, at least at this table, contingency plans for such a sharp reversal. If we had the S&P correct to 800, it would undermine enormously the achievements that we have made through our emergency programs, and if we were to observe the typical 14-year pattern to full recovery, then we would be presented with significant challenges. I don't think that tinkering with our communications policy is sufficient to prepare us for that possible

tail risk adverse scenario, and I'd like to have deeper conversations about that at another point. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President George.

MS. GEORGE. Thank you, Mr. Chairman. The Tenth District economy continues to expand at a moderate pace. Growth in manufacturing slowed in November, but is expected to move higher over the next six months. Drilling activity is responding to higher oil prices and farm incomes are strong. Real hourly wages in the District were below year-ago levels, and contacts expect only limited wage pressures in the months ahead.

Over the past few months, employment growth has picked up in the Tenth District with growth strongest in states with large exposures to energy production and agriculture. Employment growth is also returning to other areas, such as Kansas and New Mexico, where growth was minimal earlier this year. Strong farm incomes have bolstered farm investments and farmland sales in recent months. While farmers remain the primary purchasers of farmland, business contacts indicate that institutional investors have lowered their return expectations for farmland from 5 percent to 4 percent, which could foster more investor purchases in the future. With farmland values soaring and loan-to-value ratios holding steady, purchasers of farmland are taking on considerable debt.

In the national economy, recent data suggest economic conditions have improved as temporary factors weighing on growth have dissipated. The decline in inventory investment in the third quarter suggests businesses will need to ramp up production going forward. Conditions in the labor market have been improving over the past three months as the pace of growth in total hours has increased, and corporate profits are near record levels as a share of GDP, which should support investment spending.

Over the medium term, my views are largely unchanged from November. I expect the economy will continue to build momentum with growth gradually increasing to a pace that should produce further reductions in the unemployment rate. Factors supporting growth include pent-up consumer demand, business investment to expand production, and highly accommodative monetary policy. Several factors, however, pose headwinds and downside risk for economic activity over the next few years. The European debt crisis, reduced federal spending, and an impaired housing market will limit growth, with further worsening of the European crisis posing significant downside risk.

Inflation has been affected by a number of temporary factors that boosted inflation in the first half of this year and which are now pushing it lower. After these pressures unwind, I expect inflation will be somewhat below 2 percent in the near term, before rising toward 2 percent as the recovery strengthens. In summary, I expect the recovery to continue, with growth rebounding from the soft patch in the first half of this year. Risks to growth remain to the downside, while longer-term risks to inflation remain to the upside. Thank you.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. I want to spend my time talking about the appropriate metric for the maximum employment mandate. The draft consensus statement that we'll be discussing later seems imprecise on this point, aiming at employment in some places and unemployment in others, and I think our own internal dialogue shares that imprecision. In my remarks, I will suggest that the unemployment rate as opposed to the employment-to-population ratio is the better of the two metrics.

Let me give you some background about why this discussion matters. The unemployment rate peaked in October of 2009 at over 10 percent. It has fallen back to

8.6 percent, and my forecast is that the unemployment rate will continue to fall to around 8.3 percent by the end of 2012 and to 7.8 percent by the end of 2013. But the recovery in the employment-to-population ratio has been, and I believe it will continue to be, considerably less dynamic. The employment-to-population ratio is right now 58½ percent, close to its July 2011 nadir of 58.1 percent and well below its December 2007 level of 62.7 percent. My forecast for the employment-to-population ratio is that it will remain around its current value through 2013. This discrepancy poses an important question for us in terms of determining the appropriate level of monetary policy accommodation: Does the employment-to-population ratio, EPOP, or the unemployment rate provide the more useful metric for tracking deviations in what we mean by maximum employment? To help shed some light on this question, I'm going to turn to some research that is specific to the Ninth District.

The Minnesota Department of Employment and Economic Development, DEED, conducts an unusual and valuable semiannual survey of firms. As an aside, if you want to look up DEED later in Google, you don't type in "Department of Employment and Economic Development." What you type in is "positively minnesota," their website. The Department of Employment and Economic Development in Minnesota is a very cheery group. The survey that they conduct is an unusual and invaluable semiannual survey of firms, and it asks a range of questions about the vacancies being posted by those firms. We acquired the underlying data from DEED earlier this year, and one of our economists, Sam Schulhofer-Wohl has spent a lot of this past year analyzing them.

Basically, they're surveying firms about the kind of vacancies they are posting. One main finding is that once one controls for occupation and establishment effects, wage offers have grown at around 2 percent per year since 2007, as well as over the preceding five years. The

recession seemed to have little impact on the wage offer being made. By contrast, the number and composition of vacancies did change greatly over the past four years. In terms of numbers, vacancies fell in half from the fourth quarter of 2007 to the fourth quarter of 2009, and as of the fourth quarter of 2011, the number of vacancies still remained somewhat below its pre-recession levels. The unemployment rate in Minnesota behaved somewhat similarly. It rose from 5 percent in 2007 to a peak of 8½ percent in mid-2009, and it has fallen back to 6.4 percent as of October of 2011. The composition of vacancies also responded to cyclical forces. During the recession, the composition of vacancies shifted toward lower-wage positions. However, even by late 2010, the composition of vacancies had returned to something similar to the 2007 mix between high- and low-wage positions.

All I've been talking about is since 2007. If you go back all the way to 2001, the data also offer some perspective on the impact of structural forces in the Minnesota labor market. From 2001 through 2007, the number of vacancies remained roughly constant, but the composition of vacancies steadily shifted toward higher-wage positions. In the face of these changes in the composition of labor demand, the Minnesota unemployment rate remained low. It was between 4 and 5 percent in 2007 and 2006. But Minnesota experienced a steady decline in EPOP, in its employment-to-population ratio, from 2000 through 2009.

I've thrown a lot of numbers at you. Let me summarize what I think we've learned from these Minnesota data. The recession generated a transitory decline in labor demand, which had little effect on wages. Instead the decline in labor demand generated an increase in the Minnesota unemployment rate that is only gradually unwinding. But the recession also took place against the backdrop of longer-term structural changes in the Minnesota labor market. Since 2001, firms have systematically been looking for more highly skilled workers. These

structural changes did not show up in the unemployment rate, but were associated with a steady decline in the employment-to-population ratio.

What are the takeaways for monetary policy? Obviously this is one data set from one state, but from that one data set from that one state, I would say you can take away the following lessons. The unemployment rate is highly responsive to cyclical labor market conditions, while it seems much less responsive to structural labor market changes. In contrast, the employment-to-population ratio seems to respond not only to cyclical conditions, but also to longer-term trends in the composition of labor demand that are clearly outside the scope of monetary policy. My conclusion is that monetary policy should respond to the unemployment rate and the outlook for the unemployment rate, and not to the employment-to-population ratio and its outlook. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you very much, Mr. Chairman. Over the past couple of months, incoming data have been consistent with the gradual improvement in U.S. growth that we had expected for the second half of the year. At the same time, deteriorating conditions in Europe have damped the outlook for future growth in the U.S.

Recent reports from our Fifth District contacts are certainly consistent with gradually improving activity now. We have heard of several positive developments in manufacturing, for example. Two new tire plants have been announced for South Carolina, and the resolution of the NLRB complaint against Boeing has removed a cloud over a project that is expected to add significantly to employment in the Charleston region. Machine tool orders for the Southeast are said to be up substantially over the past year. A director from central Maryland reports gains in activities there. And the West Virginia energy sector continues to boom. Reports from retailers

in our District have improved quite noticeably in the past couple of months. At a gathering a week and a half ago, a number of retailers were quite positive about holiday season sales based on early results they had seen through the Thanksgiving weekend.

On the less positive side of the ledger, housing remains depressed pretty much throughout the District. Uncertainty about the magnitude and distribution of federal spending cuts continues to weigh on business and commercial real estate in the D.C. area. And we have heard that revenues at K Street lobbying firms are down significantly due to the end of earmarks, although one could argue this actually belongs on the positive side of the ledger.

On balance, I would say that our anecdotal reports line up pretty well with the national data that show a pickup in growth since the first half of the year. Overall, the tone of reports is noticeably less gloomy than in August, and for what it's worth, we have even heard a couple of references to green shoots. I have to explain to people, though, that that is likely to jinx the recovery. [Laughter] We shouldn't do that.

Inflation indicators from the Fifth District are somewhat mixed. Measures of current price trends from our surveys have generally ticked back up in the past two months, as have our wage trend measures. Expected price trends have come down in the past few months, but they are still at or above the levels we generally saw from 2006 to 2008.

At the national level, the Tealbook marks down 2012 growth by ¼ percent, essentially due to the deteriorating outlook in European growth. I have no reason to question the staff's revision; it seems sensible to me. Such a forecast certainly gives one pause regarding downside risk. This would not be the first time a contraction in one major trading area turned into a broader downturn in global growth.

Perhaps more noteworthy is the downward revision of ¾ percent to the Tealbook's projection for growth in 2013. I am not sure I fully understand the reasons behind the staff's revision, but 2½ percent for that year would not at all surprise me. Indeed, it seemed reasonably plausible back in the late spring, before the recent weakening in Europe. Growth at that rate would be consistent with the shift in our assessment that has taken place over the course of this year, toward the notion that there are more-persistent impediments to growth.

Another feature of the Tealbook projection is the imminent convergence of inflation to around 1½ percent. Granted, we have seen very low inflation readings for the past couple of months, and commodity and energy price trends appear to be quite favorable. But on a 12-month basis, we are still much closer to 3 percent than to 2 percent.

When we see several months of inflation above average, we are usually very careful to give balanced consideration to the hypothesis that it is a transitory bulge in inflation versus the hypothesis that it is a harbinger of a permanent acceleration. When we see below-average inflation we need to be equally balanced. The current slowdown in inflation could just be transitory, as was the acceleration we saw a year earlier. Thank you very much.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN DUDLEY. Thank you, Mr. Chairman. I certainly agree with the consensus around the table that the near-term activity data show more forward momentum in the economy. For us, it looks like real GDP will grow around 3½ percent or a little bit more at an annualized rate in the fourth quarter.

However, I still would be quite cautious about the implications of this for growth in 2012 and beyond. Two things that I want to highlight. First, we still have not made much progress in terms of the housing sector. To the extent that households and lenders fear that home prices will

fall further, this fear affects both the demand for housing and the supply of housing credit, and this constrains activity and reinforces the downward pressures on housing prices. If this dynamic could be broken, it would be a very positive development, which would make me more confident in the outlook. If households and lenders had a more optimistic view about the trajectory of home prices, this would increase housing demand and the supply of credit, and that would stimulate residential investment. Moreover, if we actually could see rising home prices, that rise would support household confidence and wealth, and also provide support to consumer spending. I have been making the case publicly for a number of actions that could be taken to help support the housing market. The Administration's proposals to reinvigorate the HUD program are one element of that, but there is much more that should be done and could be done to support the housing sector, and I would encourage all of us to make those points, because that is something that the Congress and the Administration could actually make further progress on.

The second thing I want to talk about is Europe. I think the considerable risks of Europe are worth highlighting. The good news, of course, that Steve talked about was that the European authorities have continued to move in the direction that reinforces the commitment to fiscal discipline and should provide greater resources to backstop sovereign debt issuance as these countries take steps to get on a sustainable path and restore their credibility. Steve highlighted all the number of steps that have been taken in that respect. However, I still have much doubt whether this will be sufficient. First, it is unclear whether the backstop for private debt issuance by such countries as Spain and Italy is sufficiently strong to encourage private investors to roll over their maturing debts, let alone take on new debt. You simply may not be able to put the toothpaste back in the tube now that investors understand how risky their sovereign debt holdings are. It's not just a question of the risk of default; it is also how volatile the market is,

where Italian and Spanish bonds can move 2 to 3 points in a day up or down. Even if they now have much more of this debt than they want, how do you induce these investors to continue to roll over their holdings as they mature?

The second issue, of course, is the ECB's role. To the extent that the ECB does not provide a solid backstop, this also sends a negative signal. Either the ECB is implicitly voting thumbs down to what has now been negotiated, or the ECB is simply unwilling to provide such a backstop regardless of the credibility of the fiscal commitments. Either way, it is a negative. There is no credible backstop. What is needed is a sufficiently credible backstop that reduces the perceived risk of investment in sovereign debt, thereby encouraging private investors to roll over their debt. To the extent that there is a less solid backstop, this is actually likely to lead to exit by the private sector. And it is important to note that this has a perverse impact in that as the holdings by the ECB and IMF climb, private holders perceive themselves as being increasingly subordinated relative to the ECB and IMF, and that perception sets off a very bad dynamic. The more the ECB purchases, it actually makes the existing stock held by the private investor perceived as more risky.

Third, there are other risks that we can face down the road. First, the fiscal austerity will cause the economies to underperform, causing the countries to fall short of their budgetary targets. Second, the poor performance will lead to further credit rating downgrades that will undermine the efficacy of institutional structures like the EFSF. Or, the political process will ultimately not support round after round of fiscal austerity.

Europe has not committed to move to a fiscal compact in which fiscal resources are pooled and obligations are mutual. There is no proposal for a path to a euro bond. Instead, the so-called compact is simply an agreement to do what was not done before—keep each individual

country's fiscal house in order in the future. This agreement means that the core issue—the inherent shortcomings of a currency union with 17 independent sovereign countries without fiscal integration—has not been addressed. As I see it, European economic performance at best will be very poor and will restrain our exports. That's the upside. At worst, the European Union will come undone. In this case, obviously, the consequences for the U.S. and U.S. financial institutions will be very severe, even though the direct sovereign debt exposure of major U.S. financial institutions to Europe is pretty modest.

Up to now, the consequences of the crisis on U.S. economic activity appear to have been quite muted. Although European banks are actively deleveraging, there is little evidence that this is significantly constraining credit in the United States. And although U.S. bank shares have fallen and CDS spreads have risen as the crisis has intensified, funding for the major U.S. banks and their broker–dealer subsidiaries has held up surprisingly well to this point. The credit rating downgrades by S&P, which brought down the short-term ratings for a number of major U.S. bank holding companies to A2, has only had a very minor impact on these companies' funding or on their liquidity buffers, at least to date. But even here, I wouldn't take too much positive signal from this. Wholesale funding can be very fickle. The risk here is exacerbated by the fact that we do not have a good lender-of-last-resort regime in place to support the major broker–dealers of U.S. firms either here or with respect to their large U.K. operations.

Finally, a few comments about the swaps. I think lowering the swap rate was a good decision. We saw a significant pickup in usage for the 84-day auction. That sent two messages: one, that there actually was a real need for dollar funding by these European institutions; and, two, the fact that there was pretty broad participation should be effective in destigmatizing those auction facilities. That should make the swaps a more effective backstop. The negative of the

swap decision is that swaps have now gotten the attention of the Congress, and there are really two concerns about the swaps: one is the lack of transparency and who the ECB is actually lending to; and, two is the concern that somehow we are taking on a lot of risk.

We should defend the swap program as very much an appropriate lender-of-last-resort function of a central bank. We should explain to people what this swap program does in terms of mitigating the degree of deleveraging that the European banks have to undertake, and that by mitigating that deleveraging, there is really a positive consequence in terms of less strain on the supply of credit to households and businesses. We haven’t really gotten our message out about why we did this, why it was effective, and why this swap program is in the U.S.’s interest. This program isn’t just a freebie for the Europeans. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I think it is worth recalling that this FOMC meeting marks the third anniversary of the Committee’s historic decision to lower the federal funds rate to zero. In announcing that decision, our December 2008 meeting statement indicated that weak economic conditions are likely to warrant exceptionally low levels of the federal funds rate “for some time.” That phrase, and its successor—“an extended period”—were generally interpreted as suggesting a likely duration of around three to six meetings. But here we are in December 2011, and not only is the funds rate still pinned at zero, but modal market expectations are that monetary policy will remain constrained by the zero lower bound for several more years. Moreover, professional forecasters, like most of us around the table, anticipate that the economy will not be back on its balanced growth path for quite a long time to come. Can there be much doubt that historians will look back on this period as the lost decade?

As we engage in our usual festivities this month, we might also keep in mind the devastating economic circumstances that continue to confront so many people around the country. For example, a record 46 million Americans can give thanks to the supplemental nutritional assistance program for the meals on their holiday tables this season. Indeed, the numbers of individuals receiving food stamps has risen month after month and is now more than 30 percent higher than in June 2009 when the NBER officially declared that the recession was over.

In sifting through the latest data, I was struck by the complex combination of recent developments. In particular, unexpectedly strong readings on consumer spending and vehicles sales were accompanied by a disappointingly large shortfall in income, and the surprisingly large decline in unemployment was coupled with only modest growth in output and payroll employment. In the end, I reached the same conclusion as the Tealbook—namely, that the incoming data confirm the fundamental picture of an economy that is recovering only gradually at best. In effect, under current policy settings, the U.S. economy continues to face an exceptionally prolonged period of unacceptably high unemployment and a duration of unemployment spells that is simply unprecedented. The longer this situation persists, the more likely it is that individuals who are unable to obtain work will be permanently scarred—a development that is not only tragic for them and their families, but will also lower the potential of our economy.

While there are certainly some upside risks to the Tealbook's outlook for a very slow recovery, it is evidently quite hard to identify any scenario under current monetary policy in which growth would be sufficiently robust to bring unemployment down to normal levels within the next several years. In fact, no such alternative simulation appeared in the Tealbook. Even in

the scenarios labeled "Faster European Recovery" and "Faster Snapback," unemployment falls only to the vicinity of 7 percent at the end of 2014. Unfortunately, the drags afflicting aggregate demand from fiscal policy, housing, and a weakening global economy and stronger dollar are just too large to support robust growth.

In my view, the risks to growth continue to be weighted to the downside. Most notably, while the Europeans may have made some progress in cementing stronger long-run fiscal discipline, they have done little to address the deterioration in the European economic outlook or to resolve the uncertainties that have caused market participants to shed sovereign debt and lose confidence in European banking institutions. Barring further major policy initiatives, those uncertainties are likely to afflict the forecast for many months, if not years, to come. We can by no means rule out an intensification of spillovers to our own financial markets and a further appreciation of the dollar that could undermine the prospects of U.S. export growth. At the same time unemployment is forecast to fall far short of its maximum sustainable level and inflation now appears likely to drift substantially below the 2 percent level most of us consider consistent with the Fed's dual mandate. Incoming data clearly confirm that inflation has subsided. Moreover, in light of the considerable slack in the labor market, subdued trends in compensation and unit labor costs, and downward pressure on import prices, the Tealbook forecasts that inflation is likely to run at around 1¼ to 1½ percent over the next several years. Fortunately, long-term inflation expectations remain stable. However, as with the balance of risks to the growth outlook, I also see the risk to inflation as weighted to the downside.

With inflation expected to remain below mandate-consistent rates, and unemployment expected to deviate very substantially from my estimate of its longer-run normal level, I consider

the case for providing additional accommodation to be very strong, as I will discuss in the policy round.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. Now I think I finally understand what it must have been like to be a European central banker in 2008. No wonder they kept calling you and urging you to act. I would imagine that in those dark days, they were the ones having to consider the possible spillover from our financial crisis to their financial markets, the threat to their financial institutions, the reduction in global demand from the loss of our consumer spending. And now I see how frustrating it must have been not to be able to forecast how and when it might be resolved, much less to have a hand in resolving it, but to know that what we did would impact their economy more than what they did.

I confess to being somewhat surprised and disappointed to see the downgrade in the Tealbook baseline forecast, driven in large part by increasing pessimism over the situation in Europe, even while domestic data came in a bit stronger than expected. Given that my comments at the last meeting were the most optimistic, and maybe even the only optimistic view at the table, I went back to those observations to see if I wanted to back up on them a bit. But I don't. I do think that the balance sheets of households, businesses, and financial institutions continue to strengthen, and all of my conversations with bankers confirmed a continuation of the same banking conditions.

With the exception of residential mortgage lending, I don't think spending is being held back by debt burdens or credit availability. In fact, banks are actually seeing some increases in commercial lending, including commercial real estate. And even though European lenders are pulling back in business and commercial real estate lending, those holes are apparently being

filled seamlessly by other banks, mostly from the U.S. but some from Japan and Canada. Even in the mortgage banks, I believe there are things that can be done. New policies that are being introduced are gaining acceptance that can improve the last area of severe credit problems.

Indeed, stronger retail sales, a pickup in auto lending and auto sales, indicators of robust early holiday spending—including significant growth in credit and debit card transaction volumes—signs of improvement in employment data, and better readings on consumer confidence all lead me to believe that it is possible that some pent-up demand from consumers might finally be showing up just as catch-up business capital expenditures start to fade.

My outlook for 2012 and 2013 is for slightly better performance than the baseline in the Tealbook, closer to the "Faster Snapback" or "Faster European Recovery" scenarios. I do recognize the risk to this outlook from the situation in Europe. If that goes badly, my forecast doesn't matter. I understand that lower readings on personal disposable income and the saving rate do not support continued improvement in consumer spending.

The Congress could certainly fail to extend the payroll tax cuts, extended unemployment, the Medicare doc fix, spending bills, or gridlock again on something else critical that I can't even think of right now. I've assumed achingly slow but still measurable progress in the resolution of housing and mortgage foreclosure issues that may not materialize. The most daunting risk for me is that my assessment is noticeably brighter than that of all the trained economists and complex models we use. [Laughter] However, even in the most optimistic scenario, inflation barely touches 2 percent. So none of my optimism about the outlook makes me reluctant to take action that could firm the momentum that I see developing. In fact, I think it is important to support strengthening where we can find it, so that it can finally break through if we ever catch a break. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. First, with President Bullard's permission and based on a conversation we had during the break, I want to clarify one comment that Jim made earlier about the divergence of the staff forecast from private forecasts. I heard Jim mistakenly—and maybe others did too—to be referring to forecasts for U.S. growth, but I think actually Jim was referring to forecasts for European growth where the staff is somewhat more pessimistic than private forecasters.

MR. BULLARD. Yes, and I apologize for not being clear enough on that.

MR. TARULLO. That is the case—I think Steve and others and I have taken a somewhat gloomier view than private forecasters, but what's important to note is that everybody has moved toward the gloomier side. I notice the Blue Chip forecast for each of the past couple of months has gone down, and their consensus is now in slightly negative territory as well. This just indicates that, as several of you have already pointed out, euro zone problems have gone from being a dark threatening cloud on the horizon to still being a dark threatening cloud on the horizon, but now almost certain to be a drag on U.S. growth in any reasonable baseline projection. An interesting question, of course, is whether in the absence of this impact from Europe, the U.S. recovery would continue to pick up pace. My own sense is that, just as has been the case a couple of times already in the post-crisis period, the marginally better-than-expected data over the intermeeting period would likely have proven to be just another short stretch of dry pavement before we hit the mud again, rather than the beginning of an open road.

I think the aggregate demand shortfall is still the story, with no particularly good reason to think that there's going to be much progress in creating the additional demand required to move the economy more quickly toward filling the output gap. I want to say a couple of things,

some of which I can dispense with because John summarized very well some of the reasons to expect that this is a short stretch of dry pavement rather than the beginning of a nice, wide, open road.

But more generally, it's useful to recall again the origins of the circumstances in which we find ourselves. It is a financially induced recession based on the bursting of asset bubbles with an enormous amount of wealth lost. Board staff has been doing a lot of work on housing policies and the housing market. One of the striking numbers that jumps out of the work they've been doing is that there's been $7 trillion in home equity lost since the peak of the housing market about five years ago. Seven trillion dollars is obviously disproportionately in the hands of consumers since most home equity is in the hands of the homeowners themselves. That has clearly affected their own calculus of their wealth and their ability to take on further debt, and indeed, their thinking about saving rates and spending in the future. That loss really has not in any way, shape, or form begun to get worked off yet. Even if we're dealing with retail debt, even if we're beginning to deal with the dysfunction of the housing market itself, there is that enormous loss of home equity, which is not going to be replaced under the most optimistic of scenarios for years to come.

Similarly, there's a lot of sunk capital, if I can put it that way, sitting basically fallow throughout the United States, whether it's in factories that are not being fully utilized or in shopping malls that are sitting half or fully vacant at this point. This is the nature of a recession following a period of overleverage and burst asset bubbles. There's not a propensity to invest, to increase supply, or to invest in more productive capacity until people are convinced, investors are convinced, producers are convinced that there's going to be more demand, and I really do think that continues to be the story.

In terms of the labor market and what it can tell us about whether there's an output gap or whether we're on a more recovery-oriented path, it's hard to use any past postwar recession as a model for comparison with what's going on now because none of those was a financially induced recession. Jim referred to the two more recent recessions, which were not only not financially induced, but also shallow. The two more severe recessions obviously were further ago, in the early '80s and the mid-'70s.

It's difficult to conclude very much from the comparative performance of the labor market post this recession compared with the earlier two shallow recessions for a couple of reasons. One, precisely because those recessions were shallow, there were not large numbers of layoffs. We saw a striking, almost frightening hemorrhage of jobs in late 2008 and early 2009, whereas in those earlier recessions, because they were shallower, the employment adjustment occurred more through attrition, which took time, and indeed continued into the recovery period. That is related to a second distinguishing factor, which was that those earlier recessions followed long periods of expansion during which it's reasonable to think that a fair number of productive inefficiencies got baked into the labor market, and thus it was easier for companies to increase production in the post-recession period without increasing employment. Here, like in the earlier severe recessions, we had a cascade of layoffs, and thus one would expect some rebound and some reduction of the unemployment rate—because the layoffs had been so dramatic—in order to increase production at all, and I think that's what we've seen. The jury is still out on exactly where we are with labor markets, but I don't think that comparison of this experience with any past recessions suggests that somehow we're performing better here.

This leads to my final observation, which is that the critical issue is whether, after five years in which we've averaged less than 1 percent growth per year and with many reasons to

believe we will at best slog along for some time to come, we're approaching the point at which future potential growth may be adversely affected by this continuing period of lower economic growth and outright recession.

In the labor market, which I've looked at more closely than any other part of the economy, I don't think we're there yet, but we're certainly much closer than we've probably ever come before in the United States, at least in the postwar period. I'll close with a slight gloss on Narayana's very interesting observations earlier about the better use of unemployment as a way of doing monetary policy. Narayana makes very good points, which would probably hold up when the data were generalized, though maybe not in quite the same magnitudes. The one thing I would say, Narayana, which I don't think you'd disagree with, is that particularly because there are some underlying structural problems in the economy, an extended period of high unemployment and subpar economic performance could increase those structural problems and thereby make the unemployment rate look somewhat better than it might actually look otherwise just because of people dropping out of the labor market. With that qualification, I agree with what Narayana said earlier. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Raskin.

MS. RASKIN. Thank you, Mr. Chairman. Some of the news we've received over the past several weeks has been pretty good. Consumers are buying motor vehicles and other goods at a faster clip than we had expected, and consumer sentiment moved up off its recent lows. In addition, the unemployment rate dropped and new claims for unemployment insurance have been edging down. However, I'm not convinced that we've actually seen much sustainable improvement in these two areas, and that's what I'd like to focus on right now. I should also say that we've seen zero improvement in the housing market, but I won't discuss that today. A lot

has been said about Europe, and I won't add anything to that discussion even though the situation is critical to our country's growth prospects.

In the labor market, all indicators other than the unemployment rate are pointing to only modest, if any, improvement. Job gains have been disappointing. Unemployment insurance claims are only creeping lower, and hiring plans are pretty stagnant this year. Even the unemployment rate declines don't look that great. Of the ¾ percentage point decline in the unemployment rate over the past year, about ¼ percentage point of it may be due to people dropping out of the labor force when their unemployment benefits run out, and probably some others are dropping out due to discouragement.

The rest of the improvement is pretty paltry for a recovery. Two and a half years into the recovery, there are still 24 million underemployed people. I think the decline in the unemployment rate exaggerates the improvement in underlying conditions, and I wouldn't be surprised if the rate moves back up a bit in December. At the current pace of improvement, it will be years before the labor market can be described in positive terms, and by that time we might well have started to see a loss of skills and networks among the unemployed and underemployed, which could cause a long-run erosion of the economy's productive potential, an outcome that we should all want to avoid.

Turning to consumer spending, while I'd like to believe the surprisingly strong consumption recently is going to continue, it just doesn't seem sustainable given all the other information. Real disposable personal income declined in both the second and third quarters—not much recovery there. The latest data on services from the quarterly services survey were also pretty weak in the third quarter. Consumer sentiment is still below the levels from last spring. While it's encouraging that sentiment has moved up from the panicky levels of the late

summer, it still remains at levels we usually see in recessions, and frankly, if the extremely low numbers we saw in September were associated with households' concerns about policymaker paralysis, the current debate about the payroll tax cut and the failure of the supercommittee is not likely to help.

One piece of the sentiment data that seems especially downbeat is households' expectations of their own income expectations. These figures have not budged from their lows at the 2008 trough. If households don't think incomes are going to improve, it's hard to see why they would begin to spend in earnest. Moreover, many households are still adapting to the $7 trillion decline in household wealth, particularly the sharp drop in real estate wealth that occurred over the past several years. Consumers probably are still trying to rebuild their nest eggs and replenish their retirement accounts, and that will likely continue to curtail their spending in the quarters ahead. With all of this pessimism weighing on households, I don't believe that the recent sharp drop in the saving rate, which now stands at 3½ percent, is really sustainable. Rather, I expect household spending to be pretty unimpressive going forward. I'll stop there.

CHAIRMAN BERNANKE. Thank you all, as always. Let me make an effort here to summarize and then make a few additional comments.

Recent data have been encouraging and suggest continued moderate growth and modest, if possibly erratic, improvement in the labor market. Moderate growth seems likely to continue into 2012, although that forecast is highly contingent on developments in Europe. However, the expected pace of growth may be insufficient to reduce unemployment by very much. Weakness in GDI is also a concern. Factors likely to restrain growth remain numerous and include continued financial volatility—especially related to Europe—labor market dysfunction, the

weakness of the housing market, the slowing global economy, continued high uncertainty, wealth loss and deleveraging, and fiscal tightening. Risks to growth continue to be broadly to the downside in large part due to the risk to financial stability emanating from Europe. Growth forecasts are also made more uncertain by the difficulty of assessing potential growth as well as identifying the appropriate jumping off point for potential growth from the period of the housing bubble. Inflation looks to be continuing its recent moderation and may drift below the 2 percent implicit target. Most participants see inflation risks as largely balanced or to the downside, but some see medium-term upside risks.

Household spending has been somewhat stronger recently, but consumers remain uncertain about the economic recovery in the labor market. The holiday shopping season appears to be off to a good start, but consumer spending is value driven. Income growth has been reported as weak so that higher spending implies a drop in saving rates. Important questions are whether the drop in income and the saving rate are real and if so, whether the higher rate of consumption spending is sustainable, particularly in light of the massive $7 trillion loss in wealth. One reason for somewhat better consumer attitudes is the slightly better tone of recent labor market indicators, including the unemployment rate and UI claims. Positive revisions to payroll data are a good sign. However, except for workers with specialized skills, hiring remains slow, participation rates are down, and labor income is stagnant. Long-term unemployment may leave permanent scars on the economy. The employment-to-population ratio remains very low in part for structural reasons. Home sales and construction are also very slow in part because of fears of further house price declines. New government initiatives may allow more people to refinance, but more could be done to help the housing market.

Businesses continue to try to navigate what they perceive to be a very uncertain economic, political, and policy environment. They see some signs of improvement, but are not yet confident in the recovery and are concerned about Europe. Their responses to uncertainty include caution in hiring and investment. A statistical analysis suggests that uncertainty affects aggregate demand more than aggregate supply. Most companies have easy access to capital funding, but the investment they are doing is selective, and they are doing more share repurchases than payment of dividends. Retailers are cautiously optimistic about Christmas sales, but there is some anxiety about stocking. Pricing pressures are down, reflecting both lower costs and difficulty in making price increases stick. Auto production and sales have continued to improve. Among the sectors also doing relatively well are agriculture, energy, electronics, shipping, and manufacturing. Fiscal uncertainties remain as the supercommittee did not agree on a deficit reduction package, and the Congress is still considering the payroll tax cut and UI extension.

Financial conditions remain hostage to European developments. Europe continues to muddle through, but the latest Maastricht 2.0 treaty appears insufficient, and the risk of a Lehman-style catastrophic financial event has not been eliminated. The ECB needs to act as a backstop. A correction in the stock market is also a risk. That said, stress in Europe lowers U.S. Treasury yields, leads funds to flow into U.S. banks, and may give U.S. banks new opportunities to gain global market share. Funding conditions for European banks and even a few U.S. institutions remain stressed despite the extension of the swap lines. The broker–dealer business and funding model in particular may be at risk. However, in the U.S., loan demand in some categories, including CRE, has shown slight improvement. Some saw credit for small businesses as remaining tight, especially from weaker community lenders. Stresses have increased in the

ABCP market and farmland prices remain worryingly high. Nevertheless, balance sheets are strengthening.

Finally, inflation pressures seem to be abating as temporary factors reverse. Commodity prices have generally been flat to down as global growth slows and as the earlier rise in core inflation seems to be reversing. Growth in wages and unit labor costs remains subdued—with some reports of nominal wage cuts—and import prices have softened. Measures of inflation expectations are well anchored. Some uncertainty about the medium-term inflation outlook is created by the fact that energy prices have recently risen. Producers expect to see some return of pricing power, and the extent of slack remains uncertain. Indeed, the recent behavior of inflation is consistent with the view that slack may be smaller than Tealbook estimates.

That's a summary. Any comments? [No response] Let me just add a few things as usual. Everything has been said, but not everybody has said it, so I will say it. [Laughter] As has been the case in the past few meetings, of course, the European situation is the biggest wild card affecting the U.S. outlook. It's interesting to note that the Tealbook in its analysis essentially treats the financial implications of Europe for 2012 and 2013 as a wash, and the effects that they are looking at are basically the trade effects and the effects of the stronger dollar. On the financial side, the wider spreads, lower stock prices, and the like are offset largely by lower Treasury yields, and so again, the financial aspects of Europe are not particularly strongly incorporated in this outlook.

But of course, as we all know, there is a wide range of potential outcomes here, and they are suggested by the Tealbook's alternative simulations, which look at two possible outcomes for Europe, one in which the unemployment rate goes to 11.8 percent, and the other in which it goes to 7.4 percent. We clearly have an enormous amount of uncertainty tied to the European

situation. We all recognize that it is dominant, and I sympathize with Governor Duke's view about the frustration of making phone calls and not necessarily having much control over what's happening.

A lot of the discussion about the European situation is treated as a technical problem. Have the technical decisions been made that are sufficient to solve the crisis, or are the technicalities perhaps enhanced or made more difficult to deal with because there are so many players?

It might be worthwhile to think about it a little bit from a game theoretic point of view as well. You've got two sides—call them North and South—who have very different objectives. On the one hand, both North and South would like to see the euro continue. They'd like to avoid a financial crisis. On the other hand, the North—Germany and its close neighbors—are most interested to avoid making any fiscal transfers or being responsible for providing any financial support to what they view as profligate Southerners. From the Southerners' perspective, the goal in the short term is to meet their fiscal obligations, but in the medium to long term, of course, is to have a successful growing economy. Those are the conflicting views, and what we've seen here to some extent is a game of chicken where both sides are threatening a crisis essentially in order to get as good a deal as they can for themselves. In that respect, it feels like we're pretty far away from a solution. From the perspective of the Northerners, there has been some progress in talking about fiscal mutual monitoring and strengthening, the Maastricht treaty and the like, but it remains quite speculative at this point. The enforcement mechanisms are not clear. Whether they'll be enforceable or not, in fact, is not clear, and certainly given where we're starting from, it's going to take quite a long time before the countries can meet the new standards. They're only making modest progress there.

On the growth side, the situation is even worse. In the short run, you have fiscal austerity. Some people have called the European negotiations a mutual suicide pact. To some extent, that's what's going on. Everybody is agreeing to cut in a way that will obviously be negative for growth, at least in the short run. But my concern, and this was a point President Evans made very well, is that in the medium term, there simply is no provision at this point for ensuring growth in the South. In particular, from a current account perspective you have an enormous set of imbalances in Europe. Germany's current account in 2011 was about 5 percent of GDP, while Portugal's and Greece's current accounts were in deficit between 8 and 9 percent of GDP. Clearly, borrowing and continued transfers or affordable lending from the North to the South—something has to happen to restore that balance or to mitigate that imbalance. As President Evans pointed out, that essentially has to be through increased competitiveness in the South, which, barring a productivity miracle, means lower wages and prices in the South or breaking out of the euro.

I won't give you the numbers, but the inflation rates in Germany, Spain, Italy, and so on are about the same, and we're seeing, if anything, very slow progress in that direction. From that perspective, in terms of achieving both fiscal stability and feasibility of growth, we're far from a solution, and given the incentives on both sides to play close to the edge, we should expect to see uncertainty and volatility for some time. Unfortunately, as we know, games of chicken sometimes end up in disaster, and that's essentially part of the whole strategy.

There have been many comparisons over the past few years to the Great Depression. Here we potentially have a comparison to Keynes' *The Economic Consequences of the Peace* and the Versailles treaty, where he pointed out that forcing Germany into extreme austerity, although it might satisfy certain moral, ethical, or political urges, had macroeconomic

consequences that might force Germany eventually to rebel. By the same token, if there's not growth for the South, eventually they're going to decide that default and leaving the euro are better options than what they have. I think it's going to continue. I agree that there's a strong incentive to avoid a collapse, and for that reason the odds are low, but there's also not very much likelihood that this is going to be put to bed any time soon.

A few words on the U.S. economy. I agree with the general observation that there have been some modest signs of improvement. We haven't heard much talk lately about recession risk, which is of course good, notwithstanding the stall-speed indicator. There are, though, a number of puzzles that we are all confronting. One has to do with household behavior. The recent consumer spending seems stronger than can be justified based both on actual income and wealth and on prospective expectations of income. As some people have discussed, there seems to be at least some risk that either income or consumption or both is being mismeasured or will revert to something more sustainable. That's a substantial source of uncertainty as we look forward.

Likewise, the labor market indicators are a little bit mixed. The differences between the payroll and the household survey are striking, and although month to month we take the payroll indicators as being more reliable, over a period of several months the household survey becomes a useful guide. There are, again, some unusually ambiguous signals being sent out by the economy recently. Even more difficult is assessing the extent of slack. President Bullard and President Kocherlakota talked about these issues. I would count myself still on the side that suggests that slack is still quite substantial. There were some interesting diagrams in Tealbook, Book A looking at various measures of attitudes and indicators of slack. One that struck me in particular was the fact that part-time work has been 6 percent of total employment since 2008,

and it hasn't shown any signs of declining. At least one interpretation of that is that it's evidence against mismatch, sectoral reallocation. Rather, it appears that firms have workers, and they have excess labor capacity, but they're unwilling to make full use of that capacity.

President Kocherlakota raised some interesting questions about the wage data, but at least the data that I have seen across industries, although occupational data are limited, suggest that compensation growth has been exceptionally weak, particularly when it's corrected for benefits and some other factors, which also suggests that labor supply is not a major constraint.

The other point I would make on this would relate to President Bullard's comment that if slack were so large, we would expect to see more disinflation. My comment related to that is that there are more factors than slack that affect inflation. In particular, until recently we've seen a pretty strong global economy that has affected commodity prices and in turn, import prices, and that, in turn, has fed through into inflation numbers in various ways. These are some factors that are offsetting the slack.

I want to summarize these last few comments by saying that there does seem to be a little bit of improvement recently, and that's encouraging. We hope it continues, but some very important uncertainties remain in terms of interpreting the data and drawing inferences about the degree of slack and the potential output of the economy.

I haven't mentioned inflation. I mostly agree with what has been said. Given weak wage growth, weak growth in unit labor costs, the fact that core inflation seems to be receding now that some of the factors that caused the rise earlier in the year are weaker, and the fact that inflation expectations seem to be well anchored at relatively low levels suggest to me that inflation should be moderate for some time. Of course, we'll continue to monitor it. I have one more comment on inflation. We have had discussions in the past about the role of rent in

inflation measures. What we're seeing is that tenants' rents have actually increased considerably. The staff reports about a 4 percent rate of increase in tenants' rents, but because private housing and apartments are not in the same locations in some sense, the translation into homeowners' rents has been much more moderate than that. I suspect that as the rental–ownership market rebalances, this surge in rents will moderate, and that it will not be a major concern either. Inflation looks to be under pretty good control for now, but as I indicated, a number of factors do affect inflation. Any final comments or questions? [No response] If not, why don't we turn now to Bill English and go into the policy round?

> MR. ENGLISH.[3] I will be referring to the handout labeled "Material for FOMC Briefing on Monetary Policy Alternatives," which contains the policy alternatives that were provided in the Tealbook as well as the associated draft directives.
>
> Turning first to Alternative B, on page 4, the Committee may view the recent economic data as suggesting that the economy has been expanding moderately and inflation has eased in recent months. The unemployment rate moved down noticeably last month, although participants, like the staff, may see that decline as likely overstating the improvement in labor market conditions, and the level of unemployment remains elevated. Participants may also be concerned that the recent pickup in growth will not be sustained, given incoming information on income trends, evidence that business investment is decelerating, and some apparent slowing in growth abroad. Moreover, a number of you noted downside risks to the economic outlook, particularly related to the situation in Europe. Given the heightened uncertainty about the outlook, the Committee may want to wait for additional information before deciding on its next policy step. Even those members who judge that additional policy accommodation is warranted may prefer to postpone such a step, perhaps until January, in hopes that it can then be accompanied by additional information about the Committee's goals and its policy framework.
>
> The first paragraph of the statement under Alternative B would be updated to acknowledge that "the economy has been expanding moderately, notwithstanding some apparent slowing in global growth." The second paragraph would again note the expected "moderate pace of economic growth over coming quarters," and point specifically to "strains in global financial markets" as continuing to pose significant downside risks to the economic outlook. The third paragraph would indicate that the Committee is continuing the maturity extension program (MEP) announced in September and maintaining its existing reinvestment policies. And the fourth

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

paragraph would again say that the Committee anticipates that economic conditions are "likely to warrant exceptionally low levels for the federal funds rate at least through mid-2013." The statement would then indicate that the Committee will "monitor the economic outlook and financial developments, and is prepared to employ its tools to promote a stronger economic recovery in a context of price stability."

A statement along the lines of Alternative B would appear to be consistent with responses to the Desk's latest survey as well as with investor expectations that are priced into asset markets. Although respondents to the Desk's survey see a significant chance that the Committee will alter its forward rate guidance or conduct additional asset purchases at some point over the next year, as Brian noted they put low odds on such a change today. As a result, the response in asset markets to Alternative B would likely be muted.

If policymakers view the information received since the November meeting as pointing to the need for additional policy accommodation at this meeting to support the U.S. recovery or to address the downside risks to the U.S. economy, they might choose Alternative A, on page 2. Committee participants may now expect that, in the absence of further policy action, economic growth would be modest over coming quarters, with the unemployment rate declining only very gradually toward acceptable levels. Moreover, some members may see resource slack remaining quite high, with inflation likely to come in below levels consistent with the dual mandate, and might view the risks to the outlook for inflation as tilted to the downside. With the Committee potentially failing to make noticeable progress in meeting both sides of its dual mandate, and with strains in global financial markets posing significant downside risks to the outlook, members might prefer a statement like that of Alternative A, which announces an agency mortgage-backed securities (MBS) purchase program, extends the period over which the Committee anticipates that it will keep rates exceptionally low, and provides additional information regarding the conditionality of that guidance.

The statement for Alternative A would indicate that the economy "has been expanding modestly, while global growth appears to be slowing." Paragraph 2 would note that without further policy action, Committee members expected that the pace of economic growth would remain modest and that unemployment would consequentially decline only "very" gradually. It would also state that inflation risks "appear to be tilted to the downside."

Alternative A offers a choice between two alternatives for additional purchases of MBS. Under the first, stated in paragraph 3, the Committee would announce that it intends to purchase a further $500 billion of agency MBS by the end of December 2012. Under the second, stated in paragraph 3′, the Committee could adopt a more incremental, open-ended approach, by announcing that it would buy agency MBS, initially at a pace of $40 billion per month, and that it would adjust this program as needed to foster the Committee's objectives. Whereas a large purchase program of a discrete nature may be preferable if the Committee wants to be clear that it is

undertaking a policy action of significant size, an incremental, open-ended approach might make it easier for the Committee to adjust the total volume of purchases, either up or down, in light of changes in the outlook for economic activity and inflation. Members might also favor such an open-ended program if they were not confident of the size of the purchase program needed to promote their objectives and were interested in suggesting that they would "do whatever it takes" to ensure sufficient support for the recovery. Under either alternative, the purchase of additional agency MBS would imply greater subsequent sales. In an environment with rising interest rates, losses realized on these sales would reduce remittances to the Treasury, potentially to near zero for a time. Under both versions of the paragraph, the Committee would maintain the MEP and its current reinvestment policies.

Paragraph 4 under Alternative A extends substantially the period over which the Committee expects it will keep rates exceptionally low by replacing "at least through mid-2013," which has been in the three previous FOMC statements, with "at least through the end of 2014." In addition, Alternative A would clarify the conditional nature of the forward guidance on the federal funds rate by providing the Committee's forecasts for unemployment and inflation at the end of 2014. These forecasts would be conditioned on the Committee's anticipated path for monetary policy as described in the statement.

Alternative A concludes in the same manner as Alternative B by stating that the Committee will monitor the economic outlook and financial developments and is prepared to employ its tools to promote a stronger economic recovery in a context of price stability.

Longer-term interest rates would likely move down in response to the adoption of Alternative A, equity prices would increase, and the foreign exchange value of the dollar would decline. However, equity prices might fall, and longer-term interest rates might drop more substantially, if investors interpreted the first two paragraphs of the statement as pointing to significantly weaker economic activity than they currently expect.

By contrast, Committee members may view the information received since the November meeting as suggesting not only that the pace of economic activity has strengthened, but also that the economic recovery is gaining traction. And they may be concerned that inflation has not moderated as much as expected this year and see that as evidence that potential output is lower than had been thought. If so, they may believe that Alternative C, on page 5, under which the Committee would reduce the size of the MEP and lay the groundwork for a move to tighter policy before long, is most appropriate.

Much of the statement under Alternative C would be close to the draft for Alternative B. However the first paragraph of Alternative C notes that the pace of economic activity appears to have "strengthened somewhat," and emphasizes that employment has continued to increase. It also describes inflation has having

moderated "only somewhat" despite a decline in energy and commodities prices. The outlook for economic growth in the second paragraph would be slightly more upbeat.

In paragraph 3, the statement would indicate that "To support the economic recovery," while helping to ensure that inflation "does not exceed" levels that are consistent with the dual mandate, the Committee decided to reduce the size of the MEP to $200 billion of purchases and sales and to complete the program by the end of March 2012. In paragraph 4, the statement would shorten the period during which the Committee expected economic conditions to warrant an exceptionally low federal funds rate by about two quarters, by indicating that the period now runs "at least through 2012." The statement then concludes by noting that the Committee is prepared to employ its tools as appropriate to promote its policy objectives.

The adoption of Alternative C would greatly surprise investors and would likely have outsized effects in financial markets, with stock prices falling and interest rates rising.

The draft directives for the three alternatives are presented on pages 8 through 10 of your handout. Thank you, Mr. Chairman. That completes my prepared remarks.

CHAIRMAN BERNANKE. Thank you. I note that this is identical to what was circulated in the Tealbook, Book B. Are there any questions for Bill?

MR. FISHER. Mr. Chairman, I couldn't hear you, sir.

CHAIRMAN BERNANKE. I just said that these statements are identical to what was circulated in Tealbook, Book B, so there's no change. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. I had a couple of questions. One is for Bill and one is for Brian Sack. The question for Bill is, I didn't see in Tealbook, Book B, and maybe I missed it, an explanation for why the staff was recommending a change in the language of paragraph 5 of Alternative B relative to what was in the previous statement of the FOMC.

MR. ENGLISH. That's what we had in the Tealbook. Our thought was that with the European situation even more uncertain, and a little more emphasis on strains in global financial

markets in paragraph 2, it made sense to note financial developments would be monitored as well as incoming information on the economy. We wanted to add those words in paragraph 1.

MR. KOCHERLAKOTA. My second question is for Brian. If the Committee were to adopt Alternative A3′—the flow of purchases—how long could we run 3′ before we ran out of capacity?

MR. SACK. The $40 billion per month was calibrated based on the gross amount of MBS production that we are seeing. The $40 billion, on top of the $25 to $30 billion a month of reinvestment you are already doing, would be a good chunk of the gross production. Of course, in terms of net supply, there is basically no increase or very little increase in the mortgage market. Even though this is calibrated to be not too much of gross production, we still need to be displacing investors over time. That will introduce a limit on how far you could go with this. But you could go through 2012, because that's what was calibrated to be comparable to the $500 billion in A3. You could go well beyond that since you are spreading it out, but obviously not indefinitely, because you are basically eating up a larger and larger share of the market.

MR. KOCHERLAKOTA. Thank you.

CHAIRMAN BERNANKE. Other? [No response] All right. We are going to do our policy go-round. Let me ask your indulgence. We would very much like to vote by 1:30, if we can. I'm sure that Michelle would like it to be earlier, if possible. If you have broader issues in monetary policy that can be postponed to the afternoon go-round, that would be very much appreciated. But, of course, everybody should say what they need to say. We begin with President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. According to the Tealbook, by mid-2013 the PCE price index will be growing at 1.2 percent, and the unemployment rate will be

8.4 percent. I, unfortunately, view this as a plausible baseline forecast with significant downside risk. Furthermore, the long-term outlook shown on page 32 of the Tealbook, Book A, indicates that in 2016 we will still be missing on both elements of the mandate. Such a forecast is consistent with taking more action, as reflected in option A.

There has been much discussion of credibility over the past few years. How credible would a central bank be that misses on both elements of its mandate for five years? I have little doubt that if we had been well above full employment for years, and the inflation rate was forecast to be well above 2 percent for the next five years, that we would be acting decisively. We should behave symmetrically, displaying equal concern when inflation is forecast to be too low and the unemployment rate to be too high. Some have argued that we cannot have an impact now that we are at the zero bound. I do not agree. If I thought that our alternative policy tools at the zero bound could not stimulate the economy enough to raise the inflation rate to 2 percent in the medium term, I would certainly be advocating aggressively for a higher inflation rate to ensure we never hit the zero bound again.

If we are going to go with option B, I question whether the language of mid-2013 is appropriate. The Tealbook forecast has us far from our target in mid-2013, and that is based on a forecast where liftoff does not occur until the fourth quarter of 2014. What are we conveying when our forecast for liftoff has lengthened by a year and a half and we do not change our announced liftoff despite the passage of time? Are we being transparent? And is that language helping us?

For this meeting, I would suggest two possible wording changes—change “2013” to “2014,” or, at a minimum, change “mid-2013” to “the end of 2013,” which is still a year less than we actually expect in the Tealbook. The problem with the fixed calendar date is quite

apparent. President Kocherlakota actually mentioned this when we first adopted it. I would prefer the language in paragraph 4 of option A to be adopted today. It ties monetary policy to economic outcomes. However, if not, I would hope that such language is in option B in January. Thank you.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. I support Alternative B. Based on the incoming data, I continue to expect the economy to recover at a gradual rate and underlying inflation to remain stable. However, I do believe that there are significant downside risks to the outlook. In particular, Europe's continued problems have increased the risk to our recovery.

In more normal circumstances, these conditions by themselves might warrant a little further easing of monetary policy. However, in today's unusual circumstances, several considerations lead me to favor an unchanged policy. One consideration is the effectiveness of the tools available to us. While I would like to see the unemployment rate decline faster, it is not clear that further easing of policy would materially boost employment. Certainly, I wouldn't claim that the monetary transmission mechanism is broken, but we have reason to think it is impaired.

A second consideration is that using the limited policy tools available to us could create future challenges. I have supported both the use of forward guidance and our balance sheet, and I remain open to further action, if warranted. But I am mindful of the analysis done by the staff that has shown that there are scenarios in which further use of these tools could create problems down the road. For example, as Bill mentioned in his comments, further expansion of our balance sheet would significantly increase the chances that our Treasury remittances fall to zero.

The final consideration is that more monetary accommodation could cause inflation expectations to become unanchored. While inflation expectations have been stable, we are just now seeing the headline PCE inflation rate move lower. With inflation still above 2 percent, more easing of policy could cause an unwelcome backup in inflation expectations.

Under these circumstances, I believe that we need to proceed very cautiously and to strike the right balance between costs and benefits of further action. In today's challenging environment, with my outlook for a stable pace of recovery, I think that Alternative B is appropriate. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, I support Alternative B. It has the benefit of accurately stating where I believe the economy is. I remain concerned, as I hinted in my questions, about the distortions that may stem from our maturity extension program, and perhaps increasingly from our activity in mortgage-backed securities. I would not support additional monetary accommodation.

I do want to make a quick comment on inflation, because, as you know, we are somewhat fundamentalist at the Dallas Fed. We do follow the trimmed mean rather religiously, and the trimmed mean is running at a six-month rate of 1.9 percent. We have had two months of softness in terms of the component numbers—falling price components—but two months don't a trend make. And I do believe, as I have said before and have pointed out in my corporate conversations, that we are trending back toward that 2 percent level.

With regard to employment, I listened carefully to Governor Yellen. I am sympathetic: I grew up in a household that was affected deeply by some of the things you mentioned, and it does tug at my heart strings. I just don't believe that we can effect a significant amount of

change there, given the present inefficiency of fiscal policy and the disincentives that are provided by our fiscal policymakers.

I also have a view that Alternative B does remind people that we are on the balls of our feet, and yet I don't think it is the time of year for us to change what we agreed to in the last meeting. It is not propitious to surprise the marketplace at this juncture. In summary, I support Alternative B. I would not support and I would vote against—despite my great respect for Eric Rosengren—extending the date past the current language, since I was opposed to it in the first place. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. The recent data suggest that the moderate economic recovery remains on track. While the European situation poses a risk to this outlook, I see no evidence to suggest that the Fed should act preemptively to stave off financial market effects of the European situation beyond what we have done already with the central bank swap lines. Over the past several years, we have developed many tools that we can use in the event of a financial crisis, and we must be vigilant and be willing to act as needed. My best guess is that Europe will muddle through somehow and avoid a full-fledged financial crisis, whose probability I think remains low. Europeans are likely to do what is necessary to avoid a total collapse.

We continue to provide a large amount of monetary accommodation to support the U.S. economy as it continues to recover. I see no evidence that trying to push interest rates even lower will have much effect on what ails this economy or help resolve the European crisis. Trying to tweak our policy for little or no effect seems to risk our credibility. I also fear that our continued efforts to tweak monetary policy, or to signal that we might do so, can add to the kind

of policy uncertainty that so many of us have heard from our business contacts is inhibiting both investment and hiring.

Thus, I can support taking no further action at this time, as in Alternative B. I am not confident that inflation expectations will remain anchored over the medium term if we keep trying to increase the degree of accommodation. In my view, we have taken some significant risks with future inflation. Unless we are extremely mindful of those risks, and are prepared to act—perhaps aggressively and at the appropriate time and in the face of what may prove to be substantial political pressure—inflation may prove to be a serious problem at some point down the road.

Regarding language, I am okay with Alternative B language as in the Tealbook. But my hope is that if we are able to go ahead and publish our policy paths in the SEP in January—as we will discuss later this afternoon—that we will be able to extricate ourselves from this calendar date issue as forward guidance in the statement. As you know, I dissented in August in part because of the use of the calendar date. I didn't favor this type of communication, since it makes it less clear that our policy is conditioned on the outlook for the economy. Making the policy path projection part of the projection exercise is a good way to emphasize the ties between economic conditions and policy. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I support Alternative B. I believe a stay-the-course approach is appropriate for the time being. As I said in the economy round, I expect the most likely outcome is that growth will continue to improve modestly, inflation will settle out at acceptable levels, and the labor market will improve gradually. This outlook is about as good as can be achieved in the face of the current set of headwinds and drags on the economy—factors

likely to be unresponsive to aggressive further stimulus. I think it is appropriate to acknowledge downside risks, but not act on them at this meeting. There certainly can be circumstances that justify taking out insurance against downside risks, but with the biggest downside risk being associated with contingent developments in Europe, it's not clear to me that this is such a circumstance.

As regards the statement language, I favor minimal changes beyond the updating of the description of current economic conditions. I think that materially changing language beyond updating the description of conditions could be disruptive. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I recommend adopting a wait-and-see posture for this meeting, and, accordingly, I advocate adoption of Alternative B. The data on the U.S. economy have generally been stronger than had been expected during the August–September time frame. While a recession in the U.S. seemed possible at that juncture, subsequent events have not confirmed that possibility. As a result, U.S. economic prospects appear to be on firmer footing for now.

The European situation remains worrisome. But given the Committee's past easing actions, it seems prudent to gather more information on the likely path of events there and the possible effects on the U.S. I am also a bit concerned that we do not inadvertently send a signal that there is some kind of dramatic Fed–ECB action pending as part of some kind of quid pro quo for governments in Europe trying to get their fiscal house in order. The markets are very sensitive to any kind of indication in that direction, and I would be concerned that we not send a signal, because I think there is no such plan.

Because of the time-consistency problems I discussed at the last meeting, I do not think further easing of monetary conditions can be achieved through mere announcements of policy intentions far in the future. For this reason, I think that any additional policy moves have to come through the balance sheet, and I do not recommend changing anything on that dimension at this meeting. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. I continue to not support Alternative B, as in the November meeting. I support some version of Alternative A. The particular version is not very important today, and I will just repeat my comments from last time that my preference would be to clarify our forward guidance through conditional economic thresholds with an inflation safeguard, and then perhaps, if that did not improve matters enough, do additional MBS as in Alternative A. I come to this, again, because of our dual mandate responsibilities, which are what the Congress charges us with. In fact, I think that is extremely good for the U.S. economy, American consumers, businesses, and everyone involved.

What helps me think about this best is John Taylor's seminal work in 1979, his *Econometrica* piece on optimal monetary policy in a rational expectations model. In that analysis, he takes a quadratic loss function for monetary policy with an output gap and inflation, and he maps out different weights on the output gap, and he is able to map out the policy frontier, which is associated with the optimal responses there. That is totally consistent with meeting the objectives of policy—hitting your inflation goal as well as keeping output gaps approximately zero on average. That delivers a good range of low variability for inflation and low variability for output gaps. As I look at the type of analysis that he does, I am led to favor a more conservative weight on the output gap—that is, a lower weight than 1 on the output gap,

relative to Taylor's model, but a weight that would be consistent with a unit weight on unemployment deviations—equal weight on unemployment and inflation.

Having said this, if you apply this level of economic rigor and discipline to describing the policy strategy, our current outlook is very far from our objectives. With current monetary policy accommodation in place, inflation in 2013 will be under our 2 percent objective and unemployment will be, as I see it, 2 percentage points above the sustainable unemployment rate, which I take to be a very conservative 6 percent. It could actually be lower than that, but it is 2 percentage points above. That is another conservative choice. We have to be forward-looking. Until our inflation forecast is pressing the upper tolerance of our inflation objective, I don't think this is even a conflicted choice for policymakers, given the unemployment situation and resource slack. I favor more accommodation. I cannot support Alternative B.

I want to close by taking note that I saw in today's *Wall Street Journal* that Allan Meltzer was quoted, and he said that more inflation is coming. I, frankly, don't know where this type of prediction comes from. There is no theory attached to it, other than perhaps that the Fed's balance sheet is very large. But there is no mechanism laid out for inflation determination, and it would help me sort through some of the problems that we have if there was more of a discussion about those theories. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. He is very consistent. He has been predicting that since 2008. [Laughter]

MR. EVANS. He has been predicting it since longer than that. [Laughter]

CHAIRMAN BERNANKE. Okay. President George.

MS. GEORGE. Thank you, Mr. Chairman. I prefer Alternative B. Data since the last meeting suggest a continuation of the moderate recovery. Consumers and businesses are

spending. Auto sales have bounced back from supply chain disruptions and are at their highest level of the year. Businesses are expected to increase production to replenish inventories that declined in the third quarter.

Of course, some sectors are not performing as well as I would like. Activity in the housing market remains at very low levels, due in part to ongoing household deleveraging. The unemployment rate remains higher than I would like, but declining jobless claims and increasing employment suggest that the labor market is slowly improving. Unfortunately, neither of these problems appears to be readily amenable to monetary policy solutions without potential tradeoffs for inflation in the future. I expect that the current softness in inflation will be short-lived and by the end of next year, I expect readings to move closer to 2 percent.

While Europe continues to pose a significant ongoing risk to the outlook, it seems reasonable at this juncture to wait in order to allow our past monetary policy actions to take effect and for policymakers in Europe to work toward solutions to their problems. Thank you.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. At our last meeting, President Williams suggested that he found it useful to consider the recommendations of simple policy rules when thinking about the appropriate formulation of policy, and in the past, the Chairman, Governor Yellen, and I have expressed similar views. Along those lines, if you look at Tealbook, Book B, it looks at the implications of a variety of simple policy rules for the path of accommodation. This is a line of rule-based analysis, and I continue to appreciate these kinds of analyses.

But I thought that the treatment of the LSAPs in the analysis in the Tealbook was a little incomplete. In this regard, I would say two things. First, I think the current level of

accommodation should include the best estimates of the accommodation that the FOMC is providing from its large-scale asset holdings. Second, the prescribed evolution of accommodation should include the use of asset purchases, especially since asset purchases are explicitly being considered in Alternative A.

I believe that the best current Board staff estimate of the impact of our current asset holdings is that they are providing accommodation equivalent to a reduction of 2½ percentage points in the fed funds rate. With that estimate in mind, when I look at the graphs on page 7 of Tealbook, Book B, it seems that if I use these simple rules, policy is currently overly accommodative and, hence, Alternatives A and B would both be inconsistent with the recommendations of these rules. This is all based on the Tealbook's estimate of potential. Like President Bullard, I would be inclined to use a slightly lower estimate of potential. Actually, President Bullard used a much lower estimate of potential.

With that said, I do see two reasons for caution. First, the recommendations of these rules seem highly inconsistent with the optimal control simulations on page 3 of Tealbook, Book B. The unconstrained optimal policy simulation implies that the Committee should be buying something like $3 trillion of long-term assets over the coming year. Second, several members of the Committee have suggested the impact of monetary policy is not being destroyed but being blunted by current household credit conditions. This impairment of monetary policy, as long as it's not being reduced to zero, would lead one to use more accommodation.

At this stage, these reasons for caution strike me as somewhat imprecise, and I would find it useful at future meetings to have staff work that fleshed them out in some way. Is there a way to put some kind of fudge factor in the policy rules that make them accord better with the unconstrained optimal control solution? In particular, we often talk about the Taylor 1999 rule

as being a very accommodative rule. Is there a way to make it line up better with the optimal control solution so that we can use it for guidance in thinking about how policy should evolve, but also have the level match up at least a little bit closer to what we have in the unconstrained optimal control solution? Second, what is the staff's best estimate of the current real impact of monetary accommodation on the economy? How is our level of monetary accommodation translating through to the real economy? These are tough questions, but I think it would be helpful for us to move them from the realm of the qualitative into the realm of the quantitative as best we can.

Despite this current imprecision of these counterbalancing considerations, I am willing to go along with Alternative B at this meeting. However, I would strongly prefer that we use the version of paragraph 5 that was in the last statement for a couple of related reasons. One is related to what President Lockhart said in his statement. We should avoid using any language beyond the updating of economic conditions. We don't want to be indicating anything that would disrupt markets in any fashion. That's the practical consideration.

More philosophically, the new version of paragraph 5 implies that we see financial market conditions as being an important factor in the making of monetary policy over and above the information that those conditions provide about the economic outlook, and I think this is problematic. Our mandate is not to make sure financial markets function well. Our mandate is to promote price stability and maximum employment, and obviously financial market developments matter, but only insofar as they affect the outlook for prices and employment. For both of those reasons—not rocking the boat and for this more philosophical consideration—I would favor Alternative B but with the old paragraph 5. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I support Alternative B. I don't see a case for changing our policy stance at this meeting, and if the data come in reasonably close to what the Tealbook is forecasting, it's hard for me to see a case for changing policy at the next meeting either.

In the interest of time I won't elaborate on this, but I have one comment about communications. I think you did a service over the summer, Mr. Chairman, by discouraging the notion that monetary policy should be held solely responsible for the economic recovery. You were wise to point to other nonmonetary factors restraining growth, and you succeeded in reducing public expectations for us to act whenever growth disappoints. Going forward, we need to reiterate that message because the downward revision in the medium-term growth trend suggests a higher likelihood that growth will disappoint from time to time. One sign of the need for continuing to discourage overinflated estimates of the potency of monetary policy appeared on page 1 of the *Wall Street Journal* this morning. In an unfortunate and unfair article, it focused on your legacy as Chairman, paid virtually no attention to inflation—apart from the brief passage that President Evans just cited—and instead took the stance that unemployment and growth were the sole relevant criteria for evaluating a central banker's performance. Again, I think we need to continue to explain that monetary policy has only limited capacity to stimulate real economic growth in these circumstances.

I agree with President Kocherlakota that the old B5 would be better than the new B5. I'm reminded of questions I've heard many times about language change in this Committee. Why are you changing it? Why now do you change this language? Have we not been following financial developments? The answer is we have been, and it will draw, as President Kocherlakota suggests, unwarranted attention to financial market developments and their

influence on our policy. I'd be with President Kocherlakota in favoring the old version of B5. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Williams.

MR. WILLIAMS. Thank you, Mr. Chairman. I support Alternative B. Recent economic data show that at best a moderate recovery is in train. Inflation is trending downward, heading below 2 percent. We are currently falling short on both parts of our dual mandate, and I expect, as many others, that this will remain true for many years to come. In these circumstances, the current highly accommodative stance of monetary policy is appropriate.

Nonetheless, as others have mentioned, the expected outcomes are highly unsatisfactory. By my own calculations of a super long-run outlook that extends the Tealbook's long-run outlook [laughter], we will not achieve either of our mandated goals until early 2018, which is a decade from the beginning of the recession. One way to improve on this dismal prospect is to upgrade our communication of our long-run goals and principles and of our policy projections. This should help further anchor expectations and enhance the effectiveness of our policy actions. I will return to this topic in our discussion later today.

As a final note, I want to return to a topic that President Fisher mentioned earlier today, and he and I have mentioned in previous meetings, and that is that I am particularly concerned about the possibility that the ongoing crisis in Europe could blow up with little advance notice. In that case, the market reaction, including massive safe-haven flows to the U.S., could drive the entire Treasury yield curve down to very low levels, potentially making our current unconventional tools of forward guidance and Treasury purchases largely irrelevant. As I have said before, we need to plan now about the options we have if such a scenario materializes and not wait until we are in the teeth of a full-blown crisis. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I can support Alternative B today, although I see a compelling case for further policy accommodation, given that my forecast envisions an extended period of unemployment far above normal levels, coupled with inflation below 2 percent. In this regard, I found the discussion of rule-based recommendations in the Tealbook very helpful. It reveals that every rule we monitor, with the exception of Taylor 1993, calls for stimulus over and above that currently in place.

There is also a strong case to do more from a risk-management perspective, given that the zero bound is expected to constrain policy for the foreseeable future, and there are exceptionally large downside risks. I'm attracted to both of the policy options in Alternative A and believe these steps deserve serious consideration by the Committee in January.

With respect to our forward guidance, I'd be inclined to shift mid-2013 guidance out to late 2014. Such a shift would be consistent with current market expectations and the outcome-based rule incorporated in the Tealbook baseline. The constrained optimal policy in the Tealbook calls for an even later onset of tightening in mid-2016. Of course, forward guidance indicating that we expect to hold the funds rate at zero through any particular date, even if appropriate in the modal outlook, should not be unconditional. I, therefore, hope we can also provide the public with greater insight into the economic conditions that the Committee believes would continue to warrant such a policy stance. We have considered a number of different approaches to elucidating conditionality, and I still see considerable merit in the threshold approach that we have discussed in previous meetings and that President Evans has publicly endorsed. But I'm open to alternatives, and the approach embodied in paragraph 4 of Alternative A, while a little bit less informative about the Committee's reaction function, also has

considerable merit. It would serve as a valuable complement to the policy projections that I think we will begin including in the SEP in January.

I'd also be supportive in January of a program of further asset purchases along the lines proposed in Alternative A. MBS purchases make considerable sense because, in addition to easing financial conditions generally, they could have a disproportionate effect on mortgage rates and the housing sector. Mortgage rates have declined this year, but the spread between the fixed mortgage rate and 10-year Treasuries has widened considerably.

While I'd be open to either of the approaches suggested in Alternative A, I see some significant merit embarking on an open-ended program of purchases as in paragraph 3′. The program proposed there begins at a modest pace, and it could be scaled up or down over time as conditions evolve. If we move in this direction, I believe it would be helpful for the public to have a very clear idea of the policy objectives that would motivate the program. I hope we will also agree to articulate a consensus statement of our goals and objectives. The publication of policy projections, coupled with a consensus statement on our goals and policy framework, would enable the public to place any further easing policies in appropriate perspective.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. I prefer Alternative B. The assessment of current economic conditions and the outlook for the future in Alternative B is closer to my own, but I also think that the darker tone and the unexpected actions contained in Alternative A—coming on the heels of recent stronger spending and employment readings—could actually create alarm in markets and spook what little confidence is emerging in households and businesses. I do believe that additional MBS purchases could be positive for the housing sector

and the economy in a number of ways. However, any action we take will be more effective if we first resolve our communication strategy.

With the exception of a potential blowup in Europe that would require its own unique reaction and perhaps swamp our available tools, I don't think there's a large risk in waiting to act, and by waiting we pick up the additional benefit of perhaps a bit more clarity on the direction of spending, income, and employment, and there is always the outside chance that something will resolve more positively in Europe. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. I favor more accommodation substantially for the reasons stated by President Evans, and more specifically, I'd be inclined toward paragraph 3 of Alternative A. But, I'm not going to advocate for paragraph 3 of Alternative A for two reasons. One, obviously, we haven't laid the foundation for additional MBS purchases right now either internally or externally. Two, maybe less obviously, I do have some sympathy for those who have observed that the efficacy of various monetary policy instruments in the absence of good fiscal policy is more constrained and more limited than we'd like it to be. It would be useful to maximize the effects of MBS purchases and consequent reductions in mortgage rates, and that can best be done through further pursuit of a variety of initiatives, which now, for the first time in a while, seem to be under consideration more seriously both by the Administration and by the Congress. If we followed Bill's advice and proselytized for the adoption of some of these additional measures by the political branches of government, action we took to lower mortgage rates would be augmented or amplified in the economy itself.

Having said that, I do look forward to a vigorous debate in January on some of the issues that have been latent in what many of you have said. I do think the question of efficacy is a

serious one. I honestly don't understand the inflation concern. So I'd be interested in hearing more about that in January.

With respect to specific language, for the same reasons stated by Betsy, I wouldn't favor a change in paragraph 4 right now. Get our communications a little bit straighter. On paragraph 5, I'm sympathetic to the point Narayana made and for an additional reason, Mr. Chairman. When we do change the language, I think people ask themselves, "What do we think has changed in the world?" I don't assess the risks from Europe any greater now than I did at the last meeting. I assessed them quite high at the last meeting, but no greater right now, and so if someone were to infer from this that somehow there's some greater concern we have, that wouldn't be quite reflective at least of my own view. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Raskin.

MS. RASKIN. Thank you, Mr. Chairman. Before I turn to my preference for policy options, I note some discomfort in the way the labor market is characterized in each of the three policy alternatives. Even in Alternatives A and B, the wording is that indicators point to some improvement in overall labor market conditions, and that is too strong. As I said in my earlier statement, although I am encouraged by the decline in the unemployment rate, I think it may be temporary, and I am not particularly impressed with the direction of other labor market indicators. I share some of President Kocherlakota's concerns about an undue focus on the unemployment rate to the detriment of other labor market indicators and look forward to further discussions in this area.

I will turn now to my policy preferences. Over the past year, observing the sluggish pace of recovery and the disappointing progress we are making toward fulfilling our statutory mandate, I have wondered whether the problem is that monetary policy is currently powerless to

address the weaknesses in the labor market or whether we have just been setting monetary policy too tight, either because we underestimated how much monetary stimulus was needed this year or because we are being overly cautious with our nontraditional tools.

Regarding the first point, it seems to me that monetary policy surely is not as powerful as it has been in the past. While I have confidence in our ability to affect longer-term interest rates, the inability of already very low rates to stimulate housing demand suggests this usually important transmission channel depends on factors that monetary policy is not equipped to address. Monetary policy cannot, for example, address the various obstacles and frictions that are limiting access to mortgage credit among creditworthy borrowers to refinancing, facilitate deeds in lieu and short sales when remaining in the property is not viable, or improve the incentives of mortgage servicers. Around this table, we have not been able to directly address the ongoing problems in the U.S. housing market, which continues to impede our economic recovery. But this doesn't mean that monetary policy is completely powerless. For me, this has been one of the fundamental challenges I have struggled with during my time on this Committee.

It occurred to me last night that monetary policy transmission might be analogous to the problem of the plumbing of the kitchen sink. When you look into your sink in the morning and see that the remnants of last night's dinner have adhered to the drain, do you roll up your sleeves and pull out the spaghetti and pieces of garlic bread, or do you blast the water from the faucet harder to force it all down? [Laughter] The critics of more monetary policy accommodation are probably people who don't advocate the water-blast-from-above approach, but believe the clogging culprits need to be removed first, one at a time, and, they might add, not by them. [Laughter] The advocates of more monetary policy accommodation believe one big blast from

the water faucet might just do the trick, and if that blast is powerful enough, it will sweep away all of the stubborn debris clinging to the sides.

What we have learned since the crisis began is that it is pretty challenging to pull out all of the flotsam and jetsam from the drain. You think you've got it all, and, lo and behold, it is not just spaghetti and scraps of garlic bread, but also lettuce and coffee grinds. You may think it is just last night's feast, but when you are pulling it all out, you realize it is also the debris of dinners past. Maybe the blast of water or several repeated blasts in succession could do the trick instead. This is a homespun way of saying that there is a considerable amount of evidence that we may be setting monetary policy too tight as we rely on others to clear the impediments to growth.

For instance, the simple policy rule prescriptions in the Tealbook are concluding that, unconstrained, we should lower the fed funds rate a couple of percentage points, and the optimal policy prescriptions are showing something similar. Moreover, these simple prescriptions are for interest rates that have their usual stimulative effects on the economy. In the current environment, when some transmission channels are clogged, you could argue that we should be doing even more than these exercises imply.

I am becoming persuaded that we need to be moving monetary policy in a more accommodative direction in order to make more rapid progress in meeting our statutory mandate. In other words, we need to turn up the water stream. Even if we can't get all conceivable benefits of the traditional transmission channels, further expansionary monetary policy could still have a positive effect on equity prices and household wealth. Lower interest rates might stimulate business investment, and dollar depreciation would tend to increase the competitiveness of domestically produced goods and services.

For this meeting, I support Alternative B. It remains uncertain how much progress fiscal policy makers and housing policy makers are making in clearing the drain. But the pace of these efforts may be increasing. We need additional information to get a better sense of if and when we should turn up the water again. I am also concerned that a move from us that we haven't clearly telegraphed and explained might be interpreted by markets as a sign that we think the situation in Europe is, well, going down the drain—a signal we should not send right now. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN DUDLEY. Thank you. I am willing to support Alternative B at this meeting. I see the logic of taking a pause at this meeting. One, we see an improvement in the recent data. Two, we see a high level of uncertainty about U.S. fiscal policy and Europe. And, three, we are contemplating some pretty significant steps in January where a policy action tied to those communication steps might make it more powerful.

Barring a significant change in the outlook, however, I would be inclined to pursuing something along the lines of Alternative A at the January meeting. In particular, a focus on purchasing agency mortgage-backed securities would be a good thing to do because it would provide greater support to the economy relative to the alternative of additional Treasury purchases. Alternative A, paragraph 4, talks about extending the date to the end of 2014—that makes sense to me given where we are in terms of our own outlook. It would be useful if we could get to the point where we could actually provide some guidance about what that date means. Why did we decide on that date? Because there were some unemployment–inflation parameters associated with that, and it would be good for us to communicate that.

In terms of thinking about further policy steps, the fact that the upside risks to inflation appear to have subsided is very important. Future policy steps are about benefits and costs, and, to the extent that inflation pressures really have come down significantly, the costs of future policy actions are very definitely diminished. One of the earlier risks of large-scale asset purchases was that these purchases were going to lead somehow to a significant increase in inflation. There is very little evidence of that, and that reduces the cost of future action.

In terms of paragraph 5, President Kocherlakota has convinced me; don't make the change. When you are making a change, people really scrutinize it. I don't think that there is a compelling case that things are so different at this meeting that we really would need to change paragraph 5. I would be inclined to keep it the way it is.

CHAIRMAN BERNANKE. Thank you, everyone. It's 1:00. What an incredibly efficient exercise, and very useful. Thank you.

Before talking about the statement, I want to follow up on comments by President Kocherlakota and Governor Raskin about the optimal control exercises. If staff could take a look at two questions. One is: To what extent does the optimal control exercise take into account the nonstandard components of our policy? The second is: If we assume, for the sake of argument, that our channels through the housing sector, for example, are impeded, to what extent does that affect the calculation? I think it would be useful to take a look at that.

MR. ENGLISH. With regard to the first question you asked, those optimal control exercises take account of whatever is in the baseline, so they would take account of the effects of whatever LSAPs and MEP we have in the baseline. They clearly don't take account of anything in Alternative A.

CHAIRMAN BERNANKE. It would be useful to write that up, though, so that people understand exactly how that works.

MR. ENGLISH. Okay.

CHAIRMAN BERNANKE. Because in some sense, the rate is also in the baseline—the past efforts of monetary policy, for example. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. Let me try to clarify, as best I can, what I was trying to get at with my first point. I certainly agreed with the way you summarized the second issue. If you look at the LSAP-adjusted policy rule, as David Reifschneider did in the memo from the previous meeting, the implication would be that our level of accommodation is pretty close to being appropriate. Whereas, if you look at the unconstrained optimal control exercise, we are far too tight right now—we should be buying an additional $3 trillion of assets over the next year. I would like to have a better understanding of the gap between those two. That was my question.

CHAIRMAN BERNANKE. We can discuss that further.

MR. ENGLISH. Sure. The short answer is that in the staff outlook the shocks that have hit the economy are more persistent than average. To take account of that greater persistence of the headwinds that are hitting the economy, policy is easier than you might otherwise expect it to be. But we can spell that out.

CHAIRMAN BERNANKE. One way to look at it would be to look at the optimal control results for a past period—for example, the Taylor rule based on 1987 to 1993 or something like that—to see if there is a systematic difference between the two approaches.

Turning to the item at hand, there is a pretty broad consensus today for Alternative B, although, obviously, people have different nuances for sure. I agree with that. We have not seen

much change in the outlook since the last meeting. The economy does look a little better, clearly still not satisfactory, and we are still looking to see how some of the policies we put in place will play out. More important, I am looking forward to this afternoon's discussion to see if we can make improvements in our framework and in our communication. If we can, that would make any given action that we would choose to take more effective and involve less uncertainty on the part of the public.

We are better off pausing for today and waiting to see if we can develop a clearer communication framework for January. My proposal would be to maintain Alternative B, not to change the mid-2013 language for today. I think it would be more effective to make that change in the context of a more well-developed communications framework.

On the suggestion of changing paragraph 5, three people have proposed that we retain the old language, that we go back to the November language. Is there anybody who would prefer to make the change? Is there anyone who opposes that change? Who wants to speak?

MR. FISHER. Go back to the language.

CHAIRMAN BERNANKE. Going back. President Rosengren.

MR. ROSENGREN. Let me make the argument. When I look at Brian's charts, and I look at the FX swap rate even after what we did, it is higher than the last FOMC meeting. If I look at spot LIBOR, it is higher than the last FOMC meeting. If I look at European bank CDS, it is higher than the last meeting. And if I look at the U.S. dollar–euro, it is higher than the last meeting.

To President Kocherlakota's point, the policy rules don't give the distribution around inflation and unemployment. If you had a very leptokurtic distribution around unemployment, if it's a very fat tail so that there is a very high probability of a very severe outcome that you worry

about, I don't think you ignore that. Therefore, I am not sure that taking finance out of paragraph 5 actually does make sense. We can have this discussion later this afternoon, but financial stability does deserve to get attention, and it is separate from just looking at the mean path of inflation and unemployment.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. That is a good point, Mr. Chairman, but we do refer in paragraph 2 to strains in global financial markets. And I would add my name as the fourth to leave paragraph 5 unchanged.

CHAIRMAN BERNANKE. Anybody else? [No response] My vibes are that we are okay for making the change back to November, barring anybody else commenting.

VICE CHAIRMAN DUDLEY. I support that change.

CHAIRMAN BERNANKE. Okay. Why don't we do that—let's change paragraph 5, taking note of President Rosengren's comments. Let's take paragraph 5 back to the original language. Any other issues? [No response] If not, can we take a vote?

MS. DANKER. Yes. This vote is on Alternative B, the statement and the directive that were in the handout from Bill, with paragraph 5 language reverting to what was used in the November FOMC statement.

Chairman Bernanke	Yes
Vice Chairman Dudley	Yes
Governor Duke	Yes
President Evans	No
President Fisher	Yes
President Kocherlakota	Yes
President Plosser	Yes
Governor Raskin	Yes
Governor Tarullo	Yes
Governor Yellen	Yes

CHAIRMAN BERNANKE. Thank you very much. It's about five after 1:00. I believe lunch is ready. Why don't we reconvene at 1:35, in half an hour? If people are still eating, we can begin the discussion over lunch. Thank you.

[Lunch recess]

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. Mr. Chairman, you deserve a better birthday than you've had so far. [Laughter] And in an attempt to contribute—

MR. TARULLO. We're going to have cake.

MR. LACKER. —to that end, I would like to suggest that the Federal Open Market Committee, both members and participants [laughter], not to mention the accompanying staff, sing you "Happy Birthday." With your pleasure. Shall be begin? [Singing and applause]

CHAIRMAN BERNANKE. Thank you very much.

VICE CHAIRMAN DUDLEY. Little split between the hawks and doves there. [Laughter]

CHAIRMAN BERNANKE. We recorded there were only four dissents. [Laughter]

MR. FISHER. It would become a YouTube sensation if it's released.

MR. LACKER. Now, isn't that better, Mr. Chairman?

CHAIRMAN BERNANKE. I do actually feel much better now. [Laughter]

VICE CHAIRMAN DUDLEY. Then it's all worthwhile.

CHAIRMAN BERNANKE. Thank you, President Lacker, I appreciate that. I also want to thank Debbie Danker for the gluten-free carrot cake cupcake, which was very nice as well. For the people recording this, we will just begin the meeting now. [Laughter] I'm informed by

the faithful secretary that we did not take the vote to ratify open market operations, and since we want to keep Brian out of jail, all in favor? [Chorus of ayes] Without exception. Thank you.

We turn now to the last principal item on our agenda, our communications. As you know, this is a very important topic. During normal times, which we can all remember, market participants can draw on their long experience with the Fed to infer our policy actions and how we might respond to certain developments. But currently, with rates close to zero and nonconventional policies in operation, and with unusual and diverse circumstances in the economy, communication is absolutely essential for effective policy, and so this is a very important session.

Governor Yellen and her subcommittee worked hard to present a couple of proposals to you today. First of all, I want to thank them for a lot of good work and for their consultation. I'll turn it over to Governor Yellen to introduce the topic.

MS. YELLEN. Thank you, Mr. Chairman. I'd like to begin by thanking the members of my subcommittee: Charlie Evans, Charlie Plosser, and Sarah Raskin for their work and collegiality. I also want to thank the staff who supported our efforts: Andy Levin, Loretta Mester, and Spence Krane.

In launching this afternoon's discussion, I thought it might be useful to begin by describing one of my favorite electronic devices, namely, the Garmin Nuvi handheld GPS. It's not quite as fancy as the new Apple iPhone, but I find it's very well suited for the specific task of helping me follow the most efficient route to where I'm going. Of course, the first step in using the Garmin is to indicate my destination or, in other words, to specify the goal that I'm trying to reach. By the way, this step isn't always so simple, especially when I'm with my husband and son in San Francisco, and we're debating what restaurant we want to eat at that evening. The

Garmin also lets me specify some basic options about the type of route: fastest, shortest, avoid highways, and so forth. Perhaps you might think of those settings as specifying the essential strategy for determining the route. Once I've entered my goal and my strategy settings, the Garmin displays the projected path from my current location to the specified destination. In particular, the appropriate path may change once I'm under way. For example, if I need to make a temporary detour, such as a pit stop for gasoline, the Garmin performs a quick recalculation and then displays a new path from that point onward. Moreover, on such occasions, the Garmin also helps reassure my passengers that we haven't gotten lost [laughter], and we're still on a feasible route to the destination.

Aside from giving you potential gift ideas for the holiday season, I hope that this analogy helps motivate the communications initiatives that our subcommittee has submitted for your consideration today. In particular, we believe it would be very beneficial for the Committee to agree on a consensus statement regarding longer-run goals and policy strategy so that the public can clearly understand our intended destination and our basic approach for getting there. And we would recommend that information about participants' assessments of appropriate policy be incorporated into the SEP starting in January so that the public can see the policy paths that underpin our projections for economic activity and inflation. In the remainder of my remarks, I will highlight a few broad issues regarding these initiatives, and then Spence Krane will brief you on some specific details.

In considering the SEP initiatives, it's useful to keep in mind that the Committee had extensive discussions of monetary policy communications in 2006 and 2007, especially since there are only a few of us old-timers sitting around the table who were around in those days of yore. We looked closely at the monetary policy reports issued by a number of other central

banks, but everyone agreed that negotiating and publishing a single FOMC forecast would be completely unworkable. We also considered the ECB's approach of publishing the outlook of the staff but not that of policymakers, but that approach also seemed problematic.

After exploring other possibilities, we finally decided to build on the same basic approach that the Committee had been following since the late 1970s in conjunction with the semiannual reports to the Congress—namely, collecting and publishing summary information about participants' economic outlook based on their own individual assessments of the appropriate path of policy—and thus, the SEP was launched in November 2007. Of course, the Committee could always decide to completely rethink our entire communication strategy, as long as everyone understands that it would likely involve another multiyear effort. Moreover, having spent a cumulative total of about a decade sitting at this table, I suspect that another big rethink might well end up with the same basic approach we decided to follow in 2007. After all, the FOMC is a relatively large and diverse Committee, and that diversity is clearly visible to the public in the minutes, as well as in our speeches, media interviews, and so forth. As we know, devoted Fed watchers can sift through all of those features and interviews in an effort to gauge the sense of the Committee and the range of views. However, it seems much more transparent and sensible for the FOMC itself to be conducting a regular survey of participants and to publish summary information about the distribution of our views using quantitative exhibits as well as qualitative narrative. Thus, our subcommittee's basic strategy has been to consider potential enhancements to the SEP rather than going all the way back to square one yet again.

In the course of our discussions back in 2006 and 2007, we did consider the possibility of including participants' policy projections in the SEP, but our assessment of benefits and costs was quite different at that time. On the one hand, we were still in the great moderation era, and

the federal funds rate was reasonably close to its longer-run neutral level, so there didn't seem to be compelling benefits of publishing information about the anticipated path of policy. On the other hand, there were significant concerns that such projections could be misunderstood as unconditional promises rather than contingent on incoming information. Consequently, it seemed appropriate to focus on conveying the economic outlook when the SEP was launched.

At this juncture, however, our subcommittee sees a compelling case for incorporating policy projections into the SEP. Given that the federal funds rate is roughly 4 to 4½ percentage points below its longer-run neutral level, our assessments of the outlook for economic activity and inflation are intrinsically linked to our judgments regarding the appropriate path of policy, including the timing of liftoff as well as the pace of subsequent firming. Indeed, it has become increasingly difficult to provide a plausible rationale for publishing our economic projections while withholding information about the policy assessments that underpin those projections. Thus, incorporating policy projections into the SEP will comprise a substantial enhancement in FOMC transparency.

Although any communications initiative is associated with some potential downside risks, our subcommittee views those risks as both modest and manageable in this instance. After all, the Committee has been providing forward policy guidance in our meeting statements for the past three years, so the inclusion of policy projections in the SEP will not be the same sort of novelty that it might have been back in 2007. In fact, publishing such information in the SEP might help underscore the conditional nature of our forward guidance because the public will be able to see how the policy projections evolve over time in response to incoming information.

Our subcommittee also recognizes that the distribution of policy projections in the SEP may not always line up neatly with the forward guidance of the meeting statement. However, to

put it in Silicon Valley terms, we see that characteristic as a feature, not a bug. In particular, our meeting statement is developed through a consensus-building process that frequently involves compromise among participants with diverse views about the appropriate path of policy. At present, that diversity of views only becomes apparent to the public through a fairly chaotic process, namely, a random sequence of speeches and media interviews. In contrast, if information about participants' policy projections is incorporated into the SEP, then the Chairman can refer to that information in his post-FOMC press conferences whenever that seems appropriate.

Looking ahead, our subcommittee is eager to explore other potential enhancements to the SEP, including several possibilities noted in our recent memo as well as any other suggestions that you would like us to consider. Our tentative plan would be to come back to the Committee with further recommendations next spring, but our motto for today is, "Don't let the best become the enemy of the good." We hope that you will support our recommendation to proceed with incorporating policy projections into the SEP starting in January.

Turning now to the second communications initiative, I'll say a few words about process. At the November FOMC meeting, the Chairman encouraged our subcommittee to develop a consensus statement regarding the Committee's longer-run goals and policy strategy. Over subsequent weeks, we prepared an initial draft and made revisions in light of the feedback we received through our informal consultations. The latest draft was circulated to the Committee last Friday, and it incorporates a few editing adjustments relative to the previous draft. Our subcommittee is hopeful that this draft can garner broad support from Committee participants. However, we're not recommending any specific decision at this meeting. Rather, we will be listening closely to your comments and we will certainly do our best to help identify any further

adjustments that would help expand the breadth of support. And if the Chairman judges the degree of consensus to be sufficiently broad, we would plan on presenting that statement for formal consideration by the Committee at the January organizational meeting. Thank you, Mr. Chairman, Spence Krane will now brief the Committee on the details of these communications initiatives.

> MR. KRANE.[4] I will be referring to the material in the chart package labeled "FOMC Briefing on Communications Initiatives." My briefing has two parts. First, I will discuss the subcommittee's recommendation that the Committee begin to collect and publish participants' projections of appropriate monetary policy in the quarterly Survey of Economic Projections (SEP). Then I will discuss the draft statement on longer-run monetary policy goals and monetary policy strategy that the subcommittee circulated last Friday.
>
> On the SEP, in the November briefing on the trial-run results, the staff presented exhibits that focused on the central tendency and range of the projections for the target federal funds rate—essentially the same approach that the SEP uses in presenting the economic projections.
>
> The central tendency is calculated by omitting the three highest and three lowest forecasts. This statistic generally comes close to covering the middle two-thirds of the values when the distribution of projections is reasonably symmetric. In contrast, when the distribution is highly skewed with substantial clustering at one end of the range, the central tendency can cover a markedly higher proportion of responses. This consideration is relevant under present circumstances, because the distribution of the funds rate projections is highly concentrated at the zero lower bound. For example, in 2012, three-quarters of the projections are 13 basis points, but the central tendency ranges from 13 to 67 basis points.
>
> In light of such considerations, the subcommittee explored alternative approaches, and settled on a design that provides further details about the distribution of funds rate projections. The SEP mockup that was circulated to the Committee on December 2 includes two new charts that are shown in exhibit 1 on the first page of your handout. These charts convey the key features of the policy projections and are intended to complement the information provided in the Committee's forward policy guidance.
>
> The upper panel of this exhibit depicts participants' assessments of the appropriate calendar year for the first increase in the funds rate. The bottom panel is a plot of the individual projections, showing the average level of the target funds rate in the fourth quarter of each year of the projection period and over the longer run. In

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

effect, the upper panel provides information about the appropriate timing of policy liftoff, while the lower panel gives a sense of participants' expectations regarding the appropriate pace of subsequent firming.

Your next exhibit shows the new text in the mockup. The introductory portion gives a brief overview of the policy projections, while the section titled "Appropriate Monetary Policy" provides a more detailed narrative. These paragraphs describe salient aspects of the assumed liftoff date and the distribution of the funds rate projections. They also summarize the key factors that informed participants' policy judgments and contributed to the diversity of their views.

With regard to participants' views about the appropriate path of the balance sheet, the subcommittee concluded that a qualitative narrative would be more practical than quantitative projections about its size, average duration, and relative composition. In retrospect, however, one shortcoming of the trial-run survey was the omission of a specific question about the balance sheet, and hence relatively few participants noted it in their submissions. Thus, going forward, it could be helpful for the SEP to ask participants whether their views for the balance sheet differ materially from the Tealbook baseline.

Looking ahead, we have identified a number of other potential enhancements to explore in the SEP. For example, the distributions of the economic projections could be depicted using an approach similar to the lower panel of exhibit 1. Information about the linkages between the policy projections and the economic forecasts could be provided, perhaps using bivariate scatterplots like the ones presented at the last FOMC meeting. We would be happy to follow up on these possibilities as well as any other suggestions that you might have for enhancing the SEP, either for external publication or for internal use by the Committee. In considering the subcommittee's recommendation to publish policy projections, you may want to refer to the approaches taken by other central banks around the world. As seen in your next exhibit, the Reserve Bank of Australia and the Swiss National Bank condition their baseline forecasts on a constant interest rate path. The Bank of England and the Bank of Japan condition theirs on financial market expectations of policy rates. The ECB, which is the only major central bank with a policy board of comparable size to the Federal Reserve's, also publishes a forecast conditioned on market expectations of the policy rate; however, this forecast is that of the staff and not the policy board. One notable disadvantage of all of these approaches is that the central banks' economic projections do not necessarily correspond to their outlook under appropriate policy.

Three central banks do publish projections for their appropriate policy rates: the Reserve Bank of New Zealand, the Norges Bank, and the Riksbank. In New Zealand, these forecasts convey the views of the governor. The Norges Bank and the Riksbank publish forecasts that represent the consensus of their policy boards, each of which has about a half-dozen members. These two central banks also publish confidence bands to emphasize the uncertainty surrounding the baseline forecast. In addition, the Norges Bank presents trajectories under some alternative scenarios. A figure taken

from the Norges Bank's most recent monetary policy report is shown in the bottom panel of exhibit 3.

One concern about publishing policy rate projections is that some members of the public may not fully understand the conditionality of the projections and may be surprised by subsequent revisions. However, this does not appear to have been a significant problem for the RBNZ, Norges Bank, or Riksbank. For example, in mid-2009, the actual values for the policy rates in both Norway and Sweden were well below the 5th percentile of the forecasts they had made the previous October. However, these differences were generally perceived as appropriate responses to the global financial crisis, and were not viewed as reneging on earlier commitments.

I will now turn to the draft language of the consensus statement on the FOMC's longer-run goals and its strategy for fostering those goals. The latest draft of the statement, distributed last Friday, is shown in your next exhibit. The first paragraph reaffirms the FOMC's commitment to its statutory mandate from the Congress to promote maximum employment, price stability, and moderate long-term interest rates. It also describes the benefits of explaining policy actions to the public as clearly as possible.

The statement then spells out the consensus goals and strategies. Paragraph 2 notes that economic disturbances cause fluctuations in the goal variables, but that monetary policy can only influence economic activity and inflation with a lag. Accordingly, the Committee's monetary policy decisions will reflect how the medium-term economic outlook and the balance of risks to this outlook compare with the Committee's longer-run goals for maximum employment and price stability.

Next, the statement addresses the price stability mandate. Paragraph 3 says that, over the longer run, inflation is primarily determined by monetary policy, and thus the Committee has the latitude to specify a long-run goal for inflation. It specifies this goal as being 2 percent, as measured by the annual rate of change in the price index for overall personal consumption expenditures. It also notes that communicating this inflation goal helps to anchor inflation expectations; this is necessary to foster price stability and moderate long-term interest rates, and also enhances the Committee's ability to promote maximum employment in the face of significant economic disturbances.

Paragraph 4 recognizes that it is not appropriate for the Committee to specify a fixed goal for employment because its maximal level is largely determined by nonmonetary factors, and that these may change over time and be difficult to measure. However, it notes that the quarterly SEP provides participants' estimates of the longer-run normal rate of unemployment based on currently available information, and it reports the central tendency for these projections from the most recent SEP. The last sentence also observes that these longer-run projections are substantially higher than they were several years ago, demonstrating that participants' judgments about the long-run normal rate of unemployment respond to changes in their assessments of the economic environment.

> The statement closes with paragraph 5 describing the strategic principle that policy will follow a balanced approach in mitigating deviations of inflation from its longer-run goal and deviations of employment from the Committee's assessments of its maximal level. It says the Committee will do so by taking into account both the size of these deviations and the potentially different time horizons over which they are expected to be closed. Your final exhibit reproduces the questions the subcommittee circulated last week to help guide today's discussion.

CHAIRMAN BERNANKE. Thank you very much. Are there any questions for Spencer?

MR. FISHER. Can I ask a governance question, Mr. Chairman?

CHAIRMAN BERNANKE. Certainly.

MR. FISHER. Assuming we get along the path here, and we decide to finalize this in January or at a subsequent meeting, is it done by a vote of the members or of the entire Committee?

CHAIRMAN BERNANKE. I'm going to address that in just a second.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. Any other questions for Spencer? [No response] Well, let me talk a little bit about—

MR. ROSENGREN. Can I ask one other governance question?

CHAIRMAN BERNANKE. President Rosengren.

MR. ROSENGREN. If somebody didn't agree with the statement and chose to dissent, are they then obligated to communicate what the Committee thought was right? I want to understand what a dissent would potentially mean. We're going to do this every year. Let's say that somebody decides that they want a 0 percent inflation rate, and everybody else thinks 2 percent is the right inflation rate, but the person for the 0 percent doesn't agree at the January meeting. Is that person obligated to talk about what the Committee's consensus viewpoint is? It's another governance question of how exactly this works at the beginning of the year.

CHAIRMAN BERNANKE. I think the framework would be the context in which decisions and discussions would take place, but it would not prevent anyone from expressing his or her own view, and we could record dissenting views or dissenting arguments as appropriate.

Let me address those governance issues that were just raised and add a little bit of substance while I'm at it. There are two issues on the table. The first one is this policy framework. I apologize to Governor Duke for bringing this issue up once again. She once said that she had heard it enough times already, but in fact, the FOMC has been discussing inflation objectives since the mid-1990s, and we've never come to a conclusion. Some of the issues that troubled us considerably in the 1990s and early part of the 2000s are no longer big issues. For example, a question that was often raised was: Isn't it better to have constructive ambiguity? That is no longer quite as big an issue as it was 15 years ago. The real issue that has always prevented consensus has been the very thorny question of how you reconcile a numerical objective for inflation with the dual mandate. My sense is that everybody around the table understands, in principle, how that would work and how, in fact, it's quite consistent with modern macroeconomics, but there are problems with communication as well as problems with wording and details. What we're trying to do today is see if we can come to a broad statement that will summarize our objectives and our policy approach for the public's benefit and give some context to our discussions.

By the very nature of this, it's going to have to be a broad tent. It's going to have to be a statement that everybody can accept with at least a little discomfort probably, but I hope enough support that they can support the statement. This will be very valuable. I have supported this kind of approach for a long time. It would help us in our communications in a lot of ways. That

being said, I view this as a quasi-constitutional type of discussion. I don't think it's something we should do on a bare majority; I'm looking for a very broad consensus.

What I propose to do on this issue is to hear everybody, just like Governor Yellen said, to try to get a sense of whether a consensus is possible or if there's a modification of the statement for which a consensus is possible. I do not anticipate making any decision today. Instead, the subcommittee will take the commentary, then go back and see whether they can find something that everyone or virtually everyone can agree with. If the answer is yes, we can consult over the intermeeting period and formally approve the statement in January.

With respect to the interest rate projections, I have a somewhat different time frame. As Governor Yellen suggested, it would be really useful for us if we're going to do this to incorporate it into the January SEP. The next quarterly projections are April 26−27, which is a long time from now. It seems to me that agreeing on interest rate projections could be a very useful tool for us, particularly as we're wrestling with the issue of these conditional dates and things of that sort. I'm hopeful that we can come to a decision on that today. I would propose at the end of the discussion to take a straw vote of all participants around the table and, if there are people who disagree, depending on the number and virulence of their opposition, we can take various measures—including recording their views in the minutes or, if necessary, making modifications.

I have a couple of final words on the interest rate projections. First, I remind everyone that we have been making these quarterly projections since 2007. They have become an increasingly important part of our communication. They are now the basis, for example, for my press conference opening statement after the projections are released, and I think the public is becoming much more comfortable with what they are and what they aren't. These projections

are conditional on so-called appropriate monetary policy, and one of the main gaps that now remains is that the public is not informed as to what that means, and that's an important problem. As Governor Yellen said, transparency would be served by providing information on what we think the appropriate policy is, conditional on information we have today. No one is arguing this should be a nonconditional commitment.

The other observation I'd like to make is, consistent with what Governor Yellen said, that this is not the last thing we're ever going to do in communications. First of all, we could probably take additional steps in the context of the quarterly projections that would be useful, and a few ideas have surfaced; we should continue to talk about that. But it's also possible that we may want to take a much different approach, and that's fine, but that's something that's certainly going to take some time. In the interim, I hope that we can adopt this approach and then continue to work as a Committee and through our subcommittees toward alternative approaches if that, in fact, becomes desirable. President Fisher, does that answer your question?

MR. FISHER. Yes, sir. Thank you.

CHAIRMAN BERNANKE. With that, let's have a go-round, and we'll get people's views on these two questions. President Kocherlakota.

MR. KOCHERLAKOTA. Yes, Mr. Chairman. You made reference to the first item being, in your view, a quasi-constitutional item. Was that to distinguish it from the second item?

CHAIRMAN BERNANKE. I don't think we need unanimity on the second item. It's an element of our communication, and in the same way that our statements involve communication decisions, it will be something that a majority could support. The distinction I would make is that, unlike a policy statement where the Committee votes, this is something that appropriately

concerns all participants, and I'd like to have a comfortable majority of participants supporting the approach. We begin with President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. I want to start off by thanking Governor Yellen, Governor Raskin, and President Evans who were on the subcommittee. It has been an interesting path, to say the least. They've put in a lot of work, and I've enjoyed working with them, and it's been very helpful. Governor Yellen's opening remarks captured a lot.

My own view is that I strongly favor incorporating our projections of appropriate policy into the SEPs. I view this as a step forward in increased transparency. As Spence indicated, it's one that other foreign central banks have taken without particular problems. Increased transparency about how FOMC participants expect policy to change in light of changes in economic conditions and the outlook can help the public form expectations about inflation and future policy. Providing information on FOMC participants' policy paths with their economic projections emphasizes that policy is contingent on the evolution of economic conditions. Over time, in particular, it will help the public understand better the nature of this contingency.

I've always thought it was odd that we provided forecasts conditioned on appropriate policy but we didn't give the public any information about what we assumed appropriate policy to be. This makes it very difficult for the public to interpret those forecasts. For example, two participants might have very different growth forecasts, not because they differ on the views about the underlying dynamics of the economy, but because they're assuming different policy paths. The public currently has no information to determine which of those is the case, except through speeches and other communications that policymakers may engage in. It would eventually be better if we could match the forecast with the policy paths, but we're not there yet,

and this proposal doesn't do that. I would be comfortable with that going forward, but that might be another step.

Publishing the policy paths provides greater transparency about the policy actions that Committee participants see as likely to be appropriate over time in fostering our goals. To me, the fact that the policy paths will change over time with economic conditions is actually a strength of the approach, not something to be feared. Indeed, as the policy projections change over time, I believe it will be pretty clear to the public that these are projections and not pledges to keep policy on the modal forecast. It will underscore the relationship between current economic conditions and the current economic outlook. An appropriate policy will give the public a better understanding of our reaction function over time as they watch these things evolve.

Giving the public a sense of the Committee's view on appropriate policy in the SEP is a much better way to convey forward guidance than using calendar dates as we currently do in our statement or locutions like "considerable period," or dating back even earlier, "measured pace." To me, these terms are vague, and the calendar dates suggest that we're not conditioning on changes in economic conditions. We are better off giving some quantitative information on the policy views of the Committee than relying on such vague references.

The diversity of views among participants will help convey a sense of confidence bands about those projections, which I consider a plus, not a minus. As Spence discussed, the Norges Bank goes much further by providing policy path projections under alternative scenarios with confidence intervals around them. That might be something we could aspire to do at this point, but we'd have to do some work to get there from here.

I do want to emphasize that we should not be thinking of the SEP policy paths as a separate tool of forward guidance, as some press reports seem to have suggested. The SEP exercise needs to remain pure. We each submit economic projections conditional on the policy path that's in our view appropriate. We should not try to manipulate these policy paths in order to control the public's expectations per se. To do so would greatly undermine the credibility of the SEP exercise and perhaps the credibility of the Committee itself. Should the public interpret the SEP paths as suggesting more accommodation or less accommodation in the future, so be it. The step of putting out the paths with the SEP is to increase transparency, not really to provide a separate tool to be manipulated as a policy tool.

Going forward, the subcommittee might want to consider some further enhancements. These include showing scatter plots like Loretta showed us in the November briefing, or full matrices of projections without names—as I suggested—as further steps toward greater transparency.

At this point I'm happy and, indeed, eager to go forward with a mock-up and begin publishing these data in January. This seems like a natural time since it is the first set of projections of the year and the Chairman will have an opportunity to explain the purpose. Taking this step at his press conference at the time would be very helpful.

On longer-term goals and policy strategies, as most of you know, I'm an enthusiastic supporter of monetary policy transparency and view communicating with the public about our framework as a further useful step in clarifying our decisionmaking process. In addition, I believe that policymaker credibility is an essential part of effective monetary policy, and it's hard to be credible without a clearly articulated framework. I strongly support the adoption of the consensus statement as revised and distributed to the Committee last Friday. As most of you

know, it took considerable effort to get to this document—in one sense as much as 15 years. In another sense, there was an informal committee of presidents that started working even last January to come up with this strategy, and the subcommittee took up the pen in November to try to refine it and push it forward.

After much deliberation and consultation, some of it more painful than others, we have ended up with the document that we put before you. This statement involves a number of compromises on the part of many Committee members, including myself. We've all been willing to make certain compromises because we believe in the greater good that would be served by articulating to the public our approach to policymaking. It should serve us well not only in the current environment, but also over the longer run when the economy and monetary policy return to more normal conditions, hopefully in our lifetime.

This document tries, as the Chairman says, to create a big tent, big enough so that it encompasses the diversity of views in this Committee. It makes important points about our goals and framework. Because it's a big tent, there is clearly some ambiguity at points, and there has to be if we're going to create the tent big enough. In particular, as Spence noted, it includes an explicit numerical long-run inflation objective. This will help anchor inflation expectations, increasing the efficacy of our monetary policy and actually making our exit strategies from accommodation more effective and more doable.

It explains the difference between price stability and maximum employment goals and why the Committee is able to explicitly set a numerical goal for inflation but has difficultly in underlining the same explicit objective for maximum employment. It acknowledges that, unlike longer-run inflation, maximum employment is largely determined by nonmonetary factors and explains that FOMC participants' assessments of maximum employment will vary over time and,

indeed, are uncertain. Note that some of this variation across participants might reflect different concepts of maximum employment derived from different approaches to modeling employment. For example, in DSGE models, the metric might correspond to the efficient level of employment—the level that prevails if all prices were flexible. This efficient level of employment varies with economic shocks that hit the economy. It differs from the usual NAIRU concept, and conceptually it differs from the longer-run forecast contained in the SEP. The beauty of the wording of paragraph 5 is that it provides a big enough tent that both of these approaches to specifying the maximum employment goal can be thought out in this framework.

There are several things in the document I would change if it were my own, but it’s not my own, and I really don’t want to dwell on those. I feel comfortable that I would be able to explain my approach to policymaking within the context of the principles laid out in the current version of the document. I hope that we’ll be able to move forward with this in January, and that we will be able to include this in the documents that we re-affirm at the annual organizational meeting each January. After that, it will be incumbent upon us to explain the purpose and the meaning of these principles in our own speeches and communications with the public. In particular, we will need to make it clear in our communications that the purpose of affirming these principles is to better explain our framework. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, at the Oxford Union you always said a little prayer before a debate, which is to sharpen the wits of those who have different views than you in order to focus your own mind.

Though having a different view on the proposal to publicly release our forecasts, I’m grateful for the good work that the Committee has done. It builds upon the first step that we had

in the Committee under Governor Yellen's group of four to enhance our communications. I very much appreciate the thought that went into the proposal outlined in the December 2 memo, but I have deep concerns about that particular memo, about the proposed expansion of the SEP to include our funds rate projections, and about the proposition that an expanded SEP is an effective way to convey policy information to the public. I'm going to argue in the spirit of presenting a different view, because I have strong feelings that it may end up having a counterproductive effect and confuse the public. Let me state at the outset that with regard to the statement of our longer-run goals and policy strategy, I'm in favor of such a statement. I have some suggested edits to the statement, but I am supportive, generally speaking, of what's been outlined in that single-page document.

I'd like to turn to the points that I made in a memo that I distributed to everybody on December 9 with regard to the SEP and inclusion of the funds rate projections. I'd like to enhance or expand upon some of the points I made in that memo. As I mentioned, I have several concerns, so let me reiterate those.

First, I sense that the funds rate projections are unlikely to provide reliable guidance to the public on what this Committee will actually do. As I said in my memo, in 2011 alone we've seen significant shifts in our outlook for GDP and for inflation and for unemployment, reflecting the obvious fact that we're in a very unfamiliar and rapidly changing environment. You referred, Governor Yellen, to the great moderation. We no longer have the kind of luxury we had back then in terms of a general sense of the direction of policy. We were quite tight-lipped back then without even thinking through what we wanted to signal a few weeks out, but we've gone through the looking glass, as I said in the memo. We're now in an economic environment we don't fully understand, and I find it odd that in that environment that we're still coming to grips

with—and admittedly we have said that our forecasts, economics, the outlook for inflation, unemployment, and all the other variables we worry about, have had to be constantly corrected—that we would now want to release forecasts for the funds rate that extend three or four more years out. On top of that, there's the added complication that the composition of this Committee will change. I won't be here four years from now, much to the relief of some people, I'm sure, but many of us will not be here over the long-term forecast horizon. When you look at it from that standpoint, these projections are unlikely to be useful as forecasts.

Second, the benefits of releasing forecasts are limited because releasing such information will just highlight the diversity of opinion among FOMC participants, while conveying very little sense of the source of that diversity of views. I believe it will be difficult for the public to decipher whether differences in policy forecasts arise from alternative predictions of future pressures on inflation and real activity, are the result of fundamental disagreements about the weights in our objective functions, or reflect different views of how the economy operates.

Third, the release of policy forecasts provides little guidance, in my opinion, on how a consensus policy path, much less any individual policy path, is likely to change as the economic outlook evolves. What happens to the policy path if growth surprises to the upside or the downside, or if inflation surprises us on the downside or the upside, or if some level of uncertainty diminishes? When you think about it, the most informative way that we could possibly report and inform the public would be for each of us to put out a decision tree to show how we would react under different circumstances. I noticed in the FRB/US stochastic simulation that the odds of a relapse of recession are relatively low, and even the odds based on the Tealbook forecast errors are low—about 15 percent. But I read through all the alternative scenarios that were proposed, and I could buy into almost any one of them. It would be most

informative if each of us took each one of those scenarios and published a decision tree as to how we would react in terms of our policy response. But I think that would lead to total cacophony.

A fourth concern I have is that the Board staff's own simulation suggests the timing of liftoff from the zero bound is less important to private decisionmakers than how we plan to conduct policy after the liftoff.

We are under intense scrutiny. Given the publicity likely to be given to the outliers among policy projections—and there will likely be dispersion—participants may be tempted or feel pressured to explain their individual thinking about the appropriate policy path. I pointed out that one paragraph and considered the questions that popped out of that section on the mock-up of the appropriate monetary policy, which was distributed again today: "Participants generally viewed the current weak economic conditions and a moderating outlook for inflation as warranting highly accommodative monetary policy for an extended period, though at some point a reduction in accommodation would become appropriate in order for the recovery to proceed in the context of price stability. A number of other key factors informed participants' projections of the appropriate path for the policy rate, including their judgments regarding the extent to which current conditions deviate from longer-run goals and the mechanisms through which policy actions affect economic activity and inflation over time." "Generally," "though at some point," "a number of other key factors," "the mechanisms"—I'm not sure how that paragraph clarifies anything. It certainly doesn't provide specificity. I can envision each one of us being asked: At what point would you think it's appropriate to reduce accommodation? What were the key factors in your projection of the funds rate? And what is your judgment regarding the extent to which current conditions are deviant from the longer-term goals and the mechanisms through which policy actions affect economic activity and inflation over time?

The cover memo considers it "inadvisable" to publish participants' balance sheet projections—something that my colleague from St. Louis has noted might be helpful—and it dispenses with it by noting that "a plethora of such projections might well be required to convey the diversity of participants' views." I'm not sure how this is any different from that exercise. How is publishing a participant's views on future funds rate paths any different? Might this not also require or lead to a plethora of projections of the key factors and judgments to convey the participants' different views? And are we not inviting even further cacophony of voices than we already have? Those are my major concerns.

In summary, Mr. Chairman, in addition to the little nitpick that I pointed out on page 11, I don't know why you would lead any paragraph with "a few" other than indicating a bias, and I would suggest that we go to the language itself if we decide to proceed down this path, which I recommend against, and that we should not phrase any sentence in such a way. But the hackneyed comment on the music of Wagner is that it's not as bad as it sounds. I would respectfully submit, again, that I am interested in providing as much information to the public as possible in order to enlighten and not to confuse. The end result of the proposal that's been put forward to us in the December 2 memo is that it's not as good as it sounds. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I think this proposed consensus statement is a very healthy and constructive step forward for the Committee. It resolves some lingering uncertainty about our framework and our objectives in a way that will enhance our credibility and our flexibility as well down the road. It does a number of important and useful things. It acknowledges our three-part legislative mandate. It states that we pursue these three objectives

in a balanced way. It sets out our numerical working definition of price stability. It notes that clarifying our inflation goal can help us improve outcomes with respect to employment, and it lays out why setting an explicit goal for maximum employment is not a good idea. It states that deviations of inflation from our goal and of employment from maximum employment are what guide policy, taking into account the complicated dynamics involved.

The trickiest part of writing a statement like this is the part about employment and unemployment. Paragraph 4 is not what I would write if I were holding the pen and describing a statement of my framework for monetary policy. But I suspect that if I did that, it would produce a statement that would not command universal agreement around the table. The subcommittee document does manage to thread the needle and create a statement that I view as not in conflict with the way I think about matters. In thinking about the views I've heard expressed about employment and inflation and monetary policy over the years around this table, I can see how it would be consistent with any other reasonable point of view about this.

To be clear, for the record, I interpret maximum employment as corresponding to something like the natural rate in a dynamic stochastic general equilibrium model. Recognizing that there are some degrees of freedom in how one chooses to define that in any given model, I take it to correspond to something like the efficient level of output that would be ground out, with a rate of employment that varies with virtually all the shocks that hit the economy from period to period. This is a very different concept from the long-run unemployment rate that the Summary of Economic Projections questionnaire asks us for. That is a rate to which unemployment would converge under appropriate policy in the absence of shocks. After the effects of all these shocks have worn off, it's what we're going to converge to in an ideal, shockless, deterministic, steady state. There's no reason, in my mind at least, that the two should

be identical, and it may not be obvious to the casual reader, but the subcommittee did a masterful job of carefully not equating the two. It cites the SEP projection, but it doesn't say that that's the same thing as maximum employment. It calls it longer-run normal employment, and that's a great device and the one that really creates the inclusiveness of this formulation. I should note this isn't literally maximum employment, but NAIRU isn't literally maximum employment. We see projections in which unemployment falls below NAIRU all the time. So we're going to have to take little liberties with that maximum part, and this statement does this in the right way. I think we do have the latitude under the act to interpret maximum employment in the way that makes the most economic sense to us and that construes the Congress's objectives appropriately. We have the latitude to define price stability as 2 percent, even though some people might argue that price stability means zero.

I have three suggestions for improving the statement. In my view, these would all preserve the inclusivity of this document. The first concerns paragraph 2. In the third sentence, the phrase "at each point in time" appears in: "Therefore, the Committee's policy decisions at each point in time reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks." The phrase "at each point in time" would have too strong a connotation of purely discretionary period-by-period decisionmaking. It seems to imply that we let bygones be bygones and don't care about maintaining our credibility. I don't think that's how we actually make policy because in practice we often find it necessary to take actions that are not time-consistent. That is, they don't maximize our objective, ignoring everything that's happened in the past. We do occasionally fight against what we'd like to do in the short run in order to preserve or restore our credibility. There are numerous episodes of that over the past three decades.

Because monetary policy outcomes have to do with expectations about the future monetary policy decisions that are made, the standard way of thinking about monetary policy is in terms of rules. The standard way of operationalizing that is as an algebraic function that links monetary policy instruments to assorted variables, but that's an algebraic convenience. Monetary policy consists of a pattern of reactions to economic variables over time, and I view our policy as consistent with that. It may seem like we come in here with a blank sheet of paper every meeting and decide anew, but we're doing that against the backdrop of what we know markets think our pattern of reaction is. We take into account whether we're going to be consistent with this, not consistent with that, and whether an action is going to change market perceptions about our pattern of reaction in the future. We take into account the direction and magnitude of a change that might take place and how that would affect current outcomes today and in the future.

Earlier in the drafting process, I suggested a couple of sentences to add to paragraph 2 to try and cast our policymaking as more rule-oriented, but without implying a strict adherence to an algebraic formula or a predestination of any strong sort. My suggestion was to add at the end of paragraph 2, "At the same time, prices and economic activity are influenced by expectations regarding the future conduct of monetary policy. Therefore, Committee policy decisions over time should form a consistent and well understood pattern of reaction to changes in economic conditions."

Reflecting on that suggestion, it occurred to me that it's tangential to the main point of this document, which is to articulate an explicit inflation goal and explain how that relates to our mandate. I came to understand a cogent rationale for omitting it. But at a minimum, we would improve this passage if we deleted the phrase "at each point in time." In fact, an improvement on

that might be to substitute for "at each point in time" the word "consistently." The sentence then would say that the Committee's policy decisions "consistently reflect its longer-run goals," et cetera.

My second and third suggestions have to do with the first sentence of paragraph 3. It says that we have "the latitude to specify a longer run goal for inflation." I see two ways to improve this. One is that, in this setting, the word "latitude" has a connotation similar to the word "license" in that it sounds like we're saying that the act allows us to do whatever we want. The way I think of it is that regardless of what the act says, we have the technical ability, that is, it's feasible for us to specify any longer-run goal for inflation. I don't think the act authorizes us to set any longer-range goal, but it would be better to have the word "ability" in there rather than "latitude."

The other way it occurs to me to improve the sentence has to do with the following part: "The Committee has the latitude," or ability, "to specify a longer-run goal for inflation." We can specify goals for whatever we want. We talked about this last time, the Red Sox post-season success and the like. What's really true is that we have the latitude to specify and achieve a longer-run goal for inflation, so I'd suggest we add "and achieve" after "specify." Those are my suggestions, but I can sign onto the statement without those changes. Again, it's a broad, inclusive approach that masterfully spans the legitimate range of views we have about how we are to think about operationalizing our goals.

As for the dots, including our policy projection—it's a great idea. I wonder though, why not dots for all of them? It seems opportunistic to only use dots here, because that makes us look more dovish than we would if we just used the box, but I endorse including that. And I endorse

asking a question about the balance sheet to improve the exposition. I thank you very much, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Williams.

MR. WILLIAMS. Thank you, Mr. Chairman. I am strongly in favor of both communications initiatives. I was struck by the fact that I agreed with everything Governor Yellen and President Plosser said in their remarks about this. I think I am going to repeat a little bit of that, but I'll try not to repeat too much of it.

Let me first add that I am extremely impressed with the magnificent—someone said masterful—job the subcommittee did in fashioning these proposals and finding what was an effective middle ground on difficult and contentious issues. Based on this heroic effort and accomplishment, this "supersubcommittee" could make short work of solving our federal budget problems as well. [Laughter] Mr. Chairman, this is just an idea you might pass on to congressional leaders during one of your meetings.

Over the past several years, we have taken many important steps to improve our communications and transparency. At each step, we have had a healthy debate about the associated risks and benefits, and President Fisher's comments reflect that healthy debate. I come out on the other side of that. Ex post, each of these steps has proved successful, and the hypothesized risks have not materialized. The initiatives before us today are a natural continuation along this path. Taken together, these two initiatives will be a major step forward in terms of transparency and accountability, and, importantly, should help our policy succeed in these challenging times.

Providing interest rate projections will help align the public's expectations with our own, and thereby improve the effectiveness of our policy actions. Furthermore, as our forecasts for

economic activity, inflation, and the funds rate evolve, the public will get a better picture of the state contingent nature of our policy reaction function. As Spence mentioned, several other central banks have successfully implemented this approach, and their experience gives me comfort that the benefits far exceed the costs. And I, too, am a big fan of the dots chart, and I am all for dot charts everywhere.

Releasing a statement of our principles will also be highly valuable for the reasons that others have already said. A consensus statement about our policy goals and strategy will help anchor inflation expectations while underscoring our firm commitment to both parts of the dual mandate. It also promises to be a valuable tool for explaining the principles that guide our policy decisions. I have long supported publishing an explicit numerical inflation objective, and this document achieves that.

I have also written a number of research papers about the real world challenges policymakers face when natural rates—say the natural rate of unemployment—are unknown and vary over time. So I have long been concerned about placing too much confidence in our ability to estimate natural rates with any precision. The language in the statement addresses these concerns very effectively. It acknowledges the uncertainty and describes the range of nonmonetary factors that help determine the maximum sustainable level of employment. Importantly, it also allows a separation between participants' shorter-run assessments of maximum sustainable employment and their views of the longer-run level—a point that President Lacker just made. This language provides ample room for Committee members to express their higher or lower views about the currently prevailing natural rate of unemployment. For example, I, like the CBO and the Board staff, currently estimate that the natural rate of unemployment is somewhat higher than its longer-run value. I have a minor suggestion that

would further strengthen that distinction between our assessments of the prevailing level of natural rates and the longer-run values. I would break into two the sentence that says, "The Committee considers a wide range of indicators in making these assessments, and information about Committee participants' estimates of the longer-run," et cetera, with the second sentence starting, "With information about Committee participants' estimates." Basically, break that into two so that we are not linking the Committee's shorter-term assessments with their longer-run estimates.

I have a second minor wording suggestion to offer. Paragraph 1 starts with, "The FOMC is strongly committed to fulfilling its statutory mandate." To me, the word "strongly" actually weakens this declaration. It is like we are saying we are really, really, really committed. [Laughter] I would drop the word "strongly" from here. Saying, "The FOMC is committed to fulfilling" is good, or you could say "firmly committed."

Finally, I do think that the principles statement should be reaffirmed each year in January. The composition of the Committee changes. Document details could change over time as more evidence and experience is accumulated on these issues. In summary, I strongly support moving forward with both initiatives in January. I do have one technical question, not that important right now, but would the idea be that the exhibit would be released prior to the Chairman's press conference, like table 1? Or would it come out when the minutes are released? I assumed it would come out prior to the press conference.

CHAIRMAN BERNANKE. We haven't finalized, but I assume that we would want to release this with the other projections that we'll talk about in the press conference. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I, too, appreciate the work of the communications subcommittee on this issue. I generally favor increased transparency, but I continue to harbor considerable doubts about whether this is the best way, or even a good way, to provide increased transparency with respect to the likely future path of policy. I am referring to the SEP enhancements here.

I tend to agree with many of the points raised by President Fisher on this matter in his memo to the Committee, and let me outline just a couple of my thoughts. While the SEP is fine as far as it goes, when it comes to policy projections, it may be advisable for the Committee to provide a more detailed assessment of the state of the economy. This could be done through a U.S. version of a quarterly inflation report as is done, for instance, in the United Kingdom. Such a report would give a view of the many elements in the economy and the many factors that come into making a forecast of future economic conditions. Such a forecast should be based upon the market perception of future policy at that juncture. This is what other major central banks do. It seems sensible to me. I see this as an appropriate way to give a complete, technical assessment of the economy for public use at regular intervals. I say technical assessment in the sense that you have a lot of data there, a lot of numbers on charts, as opposed to speeches and interviews that we do, which are more qualitative.

One advantage of such an approach is that the Committee could describe the future path of policy on many dimensions, as opposed to only the funds rate path. In particular, balance sheet policy could be described in full. This seems particularly important during the next few years as the policy rate seems likely to remain near zero. This is an important element of what we're doing here, putting more emphasis back onto the funds rate just at the time when we can't

really do very much with the funds rate and we are looking for other policy levers to move. That aspect of it is a bit counterproductive.

One element of President Fisher's memo is that the policy rate forecast, as envisioned, may not provide a reliable guide as to what the Committee will actually end up doing. For the countries that have tried this type of policy projection approach, my understanding from the available literature is that the path of future short-term interest rates has been no more forecastable under the regime of releasing policy projections than it was under the regime of not releasing policy projections.

This causes me to wonder about the efficacy of this effort. We have a chart that we sometimes pass around in St. Louis. It is a chart of the Riksbank policy path. I should have brought it with me, but I didn't, but I'll tell you what it is. It shows the actual policy path as it has moved, and it shows all of the projections at each date, which look like branches on a vine, because they are all going off at orthogonal directions from where the actual policy path went. When you use data like that and then try to figure out whether this is really enhanced transparency about short-term interest rates in Sweden, the answer comes back from the econometrics that it hasn't really enhanced or changed anything, because the policy path keeps changing in response to economic events, which is exactly what you would like it to do. Given these considerations, my preference would be to consider this matter further before going ahead. Again, I am not against transparency, I am just not sure that this is a good way to go about providing more transparency.

On the statement of longer-run goals, I support this statement as written, and we should go ahead and adopt it at the January meeting. This statement seems very much like the type of statement that might appear in Chairman Bernanke's textbook, which I regard as very much

reflective of the conventional wisdom or the mainstream view on these matters. In this regard, I do not expect the statement to be particularly controversial. I know that the Chairman has been working on adopting an appropriately flexible inflation targeting framework for some time, and I think the adoption of this statement of longer-run goals would be an important step toward establishing flexible inflation targeting in the U.S. The U.S. is a laggard on this issue within the central banking community internationally.

One of the questions is: Should this be a living, breathing document? I would take the constitutional view on this, which is that you would want to make changes only with the broadest possible support of the Committee. I would do that only once a year and with very strong support, and change it only at that type of juncture and not be tinkering with it continually. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. First, on the question of publishing FOMC participants' policy projections, I, as everyone knows, have been very supportive of doing so, and I support the recommendation of the subcommittee. I do take seriously their caution about the potential communications challenges that may ensue, and I appreciate their intention to continue exploring refinements to this initiative.

Because of the unusual, if not unique, characteristics of the FOMC compared with the monetary policy making function of other central banks, various models for developing and publishing policy projections would be difficult to replicate in our context. But there is a possibility that the effectiveness of communications using the projections may need some institutional devices beyond meeting minutes or press conferences. We should, accordingly, probably think of the exercise we may well launch in January as somewhat provisional, not in

the sense that we may abandon it, but in the sense that we may well want to modify it after some period of time.

Turning now to the statement of principles, the textbook policy value of an inflation target, or, indeed, any other set of monetary policy principles to be communicated to the public, assumes a single, coherent view of monetary policy to be implemented by a single, coherently functioning agent. That assumption, it seems to me, does not hold in the current case—that is, of the FOMC. We are quite divided on our substantive views of monetary policy, as has been reflected in virtually every FOMC meeting which I have attended in the past three years. This divergence and this set of institutional considerations raise a set of factors that are not generally addressed in straightforward economic treatments of the virtues of an inflation target or other set of guiding principles for monetary policy.

There are basically two ways for a group of people with significantly diverse views to reach agreement on a text addressing a subject on which they differ. One is to work out a substantive compromise on some or all of their points of difference. The second is to artfully craft a text with enough left unsaid or ambiguous that all sides can credibly argue that it reflects, or at least admits, an interpretation consistent with their favored position on issues for which substantive compromises have not been reached. The difficulty inherent in both strategies is obviously increased where the goal is consensus rather than a majority, or even a supermajority. I don't think that the first strategy—that is, working out a substantive compromise—has been either the aim or the outcome of the subcommittee's efforts. Indeed, it would be a rather formidable task, given the wide differences in monetary policy views held within our Committee.

The second strategy—that is, the artful crafting of a text—has frequently been used in legislation and international agreements, but it can also be used in purely private contractual transactions. Its success largely rests upon whether a coherent interpretation of that text eventually prevails. When an authoritative interpreter exists, such as a court or arbitral panel, the odds of ex post interpretative coherence increase, though by no means to 100 percent. In such cases, the negotiating parties essentially take their chances that their favored position will prevail, and they spar over wording in the negotiations in order to increase these chances. But where there is no such authoritative interpreter, as in our case of drafting principles for the conduct of monetary policy, the interpretive project is more complicated. Indeed, here the most—although not only—relevant interpreters are the very parties who couldn't agree on the substantive compromise in the first place. Sometimes an ensuing practice of compromises on specific decisions will over time yield de facto interpretive coherence. But sometimes parties will stick doggedly to their opposing positions, and, indeed, publicly reemphasize their differences as they argue for their favored views of the text. In such cases, ironically, an effort to draft a compromise text may make compromise on specific decisions more difficult in practice.

Because better communication is, if not the sole aim of this exercise, then at least its principal aim, it seems to me important to filter the potential costs and benefits through this lens of interpretive practice. Turning first to the benefits, they seem fairly modest at best. One would be the incremental advantage of anchoring inflation expectations with a stated inflation target rather than, as at present, one that is less than fully explicit but fairly widely understood to have been adopted by a significant majority of the FOMC. It seems to me one of the lessons of the past few years is that inflation expectations are already quite well anchored. A second potential benefit is that it affirms the maximum employment mandate is in fact pursued by the FOMC as a

discrete goal rather than simply as the outgrowth of policies that produce stable prices. And, third, there is the potential benefit for perhaps some greater clarity on how these mandates are balanced, though, frankly, the present statement seems fairly ambiguous on this point, and probably necessarily so, again, because of the substantive differences among members of the Committee.

The costs of such an effort seem potentially quite high, though it is not at all clear that they necessarily would be so. One, as suggested in my little discourse on interpretive practice, is that unless 16 of the 17 members of the FOMC take a vow of silence and refrain from offering their own public interpretations, there is the possibility that whatever initial clarification of FOMC collective intentions is perceived to have been provided by the statement will soon be undone in a cacophony of speeches and other pronouncements by FOMC members. Already in this go-round I have heard some efforts to stake out a particular interpretation of what the statement means, and doubtless there would be other competing such interpretations.

A second potential cost is, as also suggested earlier, that the public quality of these competing efforts to interpret the text may reinforce differences of principle or approach and thereby make agreement on specific monetary policy actions more difficult.

A third potential cost is the substantial risk that the release of a statement such as this one will bring the Federal Reserve front and center once again into the political debate—this time in a presidential election year. This kind of political debate is most likely to arise if liberal constituencies read the statement as embedding an asymmetric treatment of the two sides of the dual mandate for all of the reasons with which we are familiar. But it is also possible that even a statement such as this that does not give a specific unemployment target as a counterpart to an inflation target could still elicit unhappiness from those who would prefer a single inflation-only

mandate. To me at least, it is one thing to court political controversy because of a specific policy action, which we think necessary to achieve our mandate as an independent central bank, but it is another to court controversy in a context in which we are attempting actually to communicate policy more effectively.

The foregoing analysis leads me to continue to have considerable skepticism about the utility of this effort. Some of my concern might be allayed by changes in the text, notably language that makes clear that we have a loss function that weighs deviations from each of our two objectives equally. The way in which the statement is generally understood by analysts and the public may also be affected by the context in which it is issued—that is, other things we are doing or saying contemporaneous with the publication of the principles themselves. But even with wording changes, and what I at least would consider a useful context, it would behoove all of us to have more information on the way in which a statement of this sort would be received by the public.

I have a pretty good idea of how a single-sentence statement establishing an inflation target would be received, but I honestly don't know how something longer and more nuanced, such as the statement before us, would be understood. The commentary by Fed watchers that I have seen basically says that what is holding up an inflation target is disagreement over how to articulate the maximum employment objective. There doesn't seem to be any sense of what the possibilities are.

We haven't had any testing of something like this, at least not recently, such as through speeches of FOMC members mentioning the possibility of something of this sort. My hope would be that we can find a way to do this, and to watch and gauge the reactions to these

suggestions prior to making a decision on whether adoption of something along these lines would, on net, facilitate more effective monetary policy. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you.

MR. LACKER. Mr. Chairman?

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. I want to clarify, in light of Governor Tarullo's very thoughtful comments, my intentions. I described the consistency of my interpretation with the draft. I view it as intellectually dishonest for me to publicly claim that mine is the only interpretation. I have talked in public about differences of views, and for me this provides a great framework for describing those differences of views. I don't want anyone to be left with the impression that my intention was to publicly claim interpretive hegemony.

MR. TARULLO. Never thought it was, Jeff.

MR. LACKER. Great. Thank you.

CHAIRMAN BERNANKE. President Evans.

MR. EVANS. Thank you very much, Mr. Chairman. I would similarly like to thank my subcommittee colleagues for their great comments and the great work, and Spence, Loretta, and Andy for working so hard on this. We probably have some more work ahead of us at some point on other issues.

Let me start with the communication of the longer-run goals and the policy strategy. I agree with so many things that President Plosser laid out. It strikes me that this document describing our long-run goals and strategies offers me, certainly, but I think all of us, an opportunity to describe the policy loss function that we are thinking about, with the weights on it and how it works—what I was describing this morning. This allows me that ability to do that.

We are going to have some disagreements, and it is not really the remit of this Committee to come down with exactly what the loss function is and what the weights are and all of that. We will have to work through that.

This document did have many compromises. There was some language that I saw in the earlier document that I liked, but others didn't. There were some things that appeared at other times that others liked and I didn't, and I compromised, and this is very useful. It will serve us well, and we can all explain our views well with this.

I was quite taken with President Lacker's description of how he is thinking about this, and I agreed with virtually everything that you said. The maximum employment concept is a difficult one. If I understood it correctly, I do agree that we will use a model framework. We will use different models perhaps, and Charlie was saying the same thing when he was talking about New Keynesian models. I believe that we will bring the discipline of different economic frameworks to bear on what we mean by this concept, and if there are ambiguities at the outset, further research will help us narrow our differences or sharpen the way that we talk with each other. We will bring the research community into this, too. I can imagine some conferences that will spring out of this: Did this really help the FOMC? The Romers, undoubtedly, will want to have a part in that. They read the minutes before we do. Well, I mean—[laughter]—quite quickly.

I am optimistic. I have heard a number of good things here, and the annual adoption process of this will be something that will sharpen our focus after we do this one or two years. As we run into certain issues, that will naturally lead to a further assessment of how it works and what can be clarified, and will provide scrutiny. I fully support the way it is crafted now.

On the policy projections, these will be very helpful. As President Plosser said, appropriate policy, we have known, is highly artful. If you worked in the Federal Reserve System before you came to this table, you somehow grew accustomed to the wisdom of what Mike Prell or Don Kohn or people before that dreamed up: We can all have different policy assumptions, and they are appropriate. But the public doesn't understand it, and when we talk about it, it is very difficult. Publishing the funds rate projections would be highly transparent and helpful. It could help us with troublesome language like our mid-2013 language in the FOMC statement. The choice has been made here, and it's a very effective presentation of the data.

The last thing, other than to simply say I support all of this, would be on this issue about the funds rate projections and the reliability of those. This is a very broad point and is what is missing from this discussion: Any time you put out a forecast, things happen between now and when the forecast period occurs. And there are forecast errors—the history of forecasting is that inflation is very difficult to forecast. The Minneapolis Fed has highly cited work on that. It is hard to beat a random walk. Think about it this way: Let's say we adopted a simple rule and it had a Taylor-form structure to it, but we did not actually have our funds rate projections. If we gave enough information in the SEPs, then we could run those output gaps and inflation deviations through the simple Taylor rule and come up with everybody's implied policy projections. It would be an automatic algorithm. This is inevitable if you go a number of different ways. For me the issue is: How do we sharpen it to get the best type of projections out there in front of people? The issue is not: Don't do it. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Unless people are eager to get to the airport, we could take 15 minutes for coffee. Is that okay? No objections? All right.

[Coffee break]

CHAIRMAN BERNANKE. Let's recommence, and we will turn to President George.

MS. GEORGE. Thank you, Mr. Chairman. I, too, want to thank the subcommittee for this very thoughtful work. I support a set of principles that describe our longer-run goals and policy strategy. I would like to see the statement, however, acknowledge the interactions among financial stability, monetary policy, and our objectives, and note that the current draft makes no reference to financial stability. Given our discussions, including today during the policy go-round, where we make explicit references to financial markets and financial developments, it would seem appropriate to me for any statement to include our consideration of financial stability. I agree that this statement should be affirmed at the annual organizational meeting each January, and while I believe it should be a living and breathing document, it seems to me the benefits of providing the statement would diminish rapidly if we were to change it every year to any significant extent.

Regarding the enhancements to the SEP, I remain open to making greater use of these projections to provide additional information about our thinking. However, like some others, I have some reservations about providing policy projections to the extent that they unintentionally hinder our communication, both within the Committee and with the public. In our public communication, I assume FOMC participants will discuss their preferred policy path in the same way they now discuss their outlook for growth and inflation, which makes me ask, would doing so lead participants to become more locked into a particular policy stance prior to each meeting? Moreover, it seems likely that the public could focus more on the policy projections and not on how the projections changed in response to changes in conditions and forecasts, thereby reducing the value of providing these projections in the SEP.

Looking at communications within the Committee, likewise, I am concerned that participants may become more locked into a particular policy stance prior to each meeting, thereby limiting the value of our discussions and making it even harder to reach consensus on our policy decision. Thank you.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. Before providing my thoughts on the proposal, I also want to add my thanks to the subcommittee and the supporting staff for all of their work on enhancing our communications. They had a tough job, and they carried it out very well.

In broad terms, I support both of the subcommittee's proposals for improving the communications of the Committee. I believe that each proposal represents a logical next step in our longer-term efforts to enhance transparency, accountability, and the effectiveness of monetary policy. By combining the statement of our longer-run goals and policy strategies with the extension of the SEP, we would be providing the public with much more information about our flexible inflation targeting framework. And over time, the implementation of the proposals would give the public a better sense of the Committee's policy reaction function.

With that broad overview, I will answer the specific questions posed to us, starting with incorporating our policy projections into the SEP. In general terms, the approach the subcommittee has recommended seems reasonable. Providing our funds rate projection will give the public important information on the Committee's reaction function. Describing the reaction function in simple words would be very difficult, especially given the diversity of views on the Committee. Publishing our policy projections is an easier way of conveying much of the same essential information.

Certainly, I recognize that there are risks to publishing interest rate forecasts. For example, we will have to be sure to explain that the projections are conditional on the state of the economy, and, therefore, subject to change. But other central banks, as has been noted, have been able to address these kinds of challenges and use interest rate projections to improve their communications, and we should be able to achieve the same.

Once we start to publish our policy projections, though, there is no turning back. While the Committee's approach seems reasonable, I didn't see a reason to rush. I would have preferred to take a little more time to be sure that our communications approach in the SEP is effective and doesn't yield some unintended consequences. More specifically, to be sure that the fed funds rate projections are helpful, I would have liked to have seen how they evolve as we update our economic forecasts in coming months. We have only had one trial run.

I was going to suggest that we take a little time to consider also some of the different approaches that we might use to present the forecast in charts. While the proposed figure 2 is useful in some important ways, it is very specific to the circumstances we face today. Once we have moved closer to a normal policy stance, we will have to decide what figure we will replace it with. I had preferred to see us think through some of these things before moving ahead, but I can support moving ahead in January with the provision that we continue to smooth out any of the rough spots that develop along the way.

Regarding other potential enhancements, between now and January, I would suggest that we spend some time looking at whether we want to refer directly to the SEP information in our forward guidance and our statement. Policy Alternative A in the Tealbook provided the specific example of the use of our forecast and forward guidance. In principle, the use of the SEP information is going to be helpful in forward guidance, and it could improve our

communications. But in practice, if we use the SEP information in forward guidance, we might want to adjust the schedule that we present our SEP, because right now three of the SEP meetings occur in the first half of the year, and we only have one SEP meeting in the second half of the year. It would be useful to take a look at this practical issue and the potential merits of using the SEP information in our forward guidance.

Turning to the statement regarding the Committee's longer-run goals and policy strategy, I strongly support the draft statement. As you know, I have for some time favored the adoption of an explicit numerical goal for inflation. To me, that is the most important achievement of the statement. But I also see the value in clearly indicating that we place equal weight on our dual long-run goals of price stability and maximum employment, and in explaining why one goal has a more precise numerical objective than the other. The statement does a good job of describing our broad strategy for achieving the goals over time.

Finally, I view the statement as a broad set of principles that guide the conduct of monetary policy. Because it focuses on principles the bar for changes should be high and the statement shouldn't need frequent adjustments. That said, it is certainly possible that the need for adjustments could arise occasionally over time, so I do support a plan to reaffirm the statement at our annual organizational meeting in January. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I, too, want to thank the subcommittee. I know this was hard work, I could tell that in Charlie Plosser's voice on the phone. [Laughter]

I will respond to the questions as presented. First, regarding the enhancement to the SEP, I support the subcommittee's recommendation and favor implementing it with the January SEP. I also support considering the inclusion of a question about balance sheet assumptions in the SEP

questionnaire and summarizing responses as part of the narrative. The staff assumptions about the balance sheet path seem like a reasonable benchmark on which to build that narrative. Down the road, however, this could be somewhat challenging. I see a difference between publishing the very familiar and relatively simple federal funds rate information, and trying to explain participants' various views on the balance sheet with all of the different exit scenarios and preferences that we will be considering at some stage, as well as other influences on the balance sheet—for example, use of the swap line. I see that as conceivably a bit more challenging.

But in general, I support considering further enhancements noted by the subcommittee. It could be especially useful to provide information about the linkages between participants' policy projections and their economic forecasts. I am less convinced, however, that information or commentary about the participants' sense of the balance of risks around policy projections would be all that useful.

President Fisher has offered some useful cautionary points. I would like to make a couple of counterarguments. I am not so concerned about a succession of quarterly forecasts that include policy forecasts putting pressure on the Committee to stick to prior forecasts or risk disappointing markets. I don't believe market participants will fixate on past statements unless there is a stark difference from one to the next. I think market participants understand that we are constantly reappraising the path of the economy and reoptimizing appropriate policy. Also, markets understand that response to shocks and unexpected developments is part of policymaking. The markets will see the policy forecasts as useful information but understand them for what they are. Most market participants understand that the composition of the Committee will change and can factor that into their processing of the information.

Turning to the statement of longer-run goals and policy strategy, I support the adoption of the statement drafted by the subcommittee. Like many, I had some small nits to pick. I conveyed those in a detailed memo a week ago Monday, so I am not going to repeat them here. I am in favor of treating the statement as a living, breathing document, to be reaffirmed at the annual organizational meeting in January, although I agree with President George and others that in all likelihood, as a statement of guiding principles, we should not be adjusting it frequently. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. I want to join others in thanking the subcommittee for their hard and thoughtful work on both these important topics. I was going to say that I strongly support the statement as written, but with President Williams's guidance I will say I "firmly" support the statement as written. [Laughter] I also think that we should be treating the document as a living and breathing document, with the notion of its being a quasi-constitutional framework that would require a broad consensus to amend or change.

Contrary to some of the thoughts that President George offered, I am very happy with the exclusion of financial stability objectives. The Congress has laid out our three mandates; they are hard enough to define as it is, without adding in new ones for ourselves. If the Congress wants to mandate that we are in charge of financial stability—and hopefully they will give us some guidance about what they mean by that—[laughter] don't count on it, but maybe they will—then we could add it as an objective. I'm happy with this draft in many respects, but in particular, I am happy with the exclusion of financial stability as an objective.

With that said, we should continue to work to establish consensus, wherever possible, about the elements of our policymaking framework, and try to communicate where we can about

that consensus to the public. It would be great if we could address a couple of issues in similar statements in the next six months or so. Here I am thinking more of a statement similar to the one we issued in June about our exit strategy. One issue that could help clarify things is to decide what exactly our metric for performance in terms of the maximum employment mandate is going to be. This is something I talked about earlier this morning. Is it going to be employment or is it going to be unemployment? The current statement is imprecise on this point, probably by design. But we should talk about this, and I indicated this morning that it would be better for us to focus on the unemployment rate when we think about building the loss function that President Evans has referred to.

Along those same lines, our current statement refers to balancing deviations for maximum employment and price stability. Is there a way for us to provide more explicit information about how the Committee does that balancing act? In technical terms, what can we say about the properties of the loss function that underlies the Committee's decision? At our last meeting President Evans, President Rosengren, and I had an implicit conversation about this, and it sounded like we disagreed, but actually, we agreed. What we agreed on was that we would be willing to use a symmetric weakly concave loss function over unemployment and inflation deviations.

That might be overly technical for inclusion in a public release. But it has a very useful implication in plain English. All three of us would agree with the following statement, "If unemployment is more elevated relative to its mandate-consistent level than is inflation, then the Committee would be willing to follow policies that lead inflation to rise by X percent, X small, as long as they also lead unemployment to fall by more than X percent." Basically, as long as you are using a concave objective—obviously, this is an overly technical term—but what it

translates into is if you're further away from your unemployment objective, you are willing to let inflation rise by a certain amount as long as unemployment falls by at least that much. If we can forge consensus around these kinds of precise statements, it would greatly help to clarify the Committee's policy goals and objectives. I could go on, but I want to move to talking about the SEP projections. I want to encourage us to continue to build consensus where we can about our framework, being as precise as we can be, while respecting the heterogeneity of views that we have around the table. I would point to these two issues that we could think about.

In terms of the SEP projections, I am very much a pro-transparency person. Broadly speaking, I favor including policy projections in the SEP. But I'm not in favor of transparency just for the sake of transparency. I'm in favor of transparency for the sake of clarity, and President Fisher and others have made some great comments about how this may not really enhance clarity as much as we would like.

I have a distinct concern about how to build the policy projections into the SEP. Under the proposal, the public is going to see a cross-sectional distribution of 17 fed funds rates at three future dates. These distributions are designed to provide forward guidance to the public about the likely path of monetary policy. That's the point of them. This means that all 51 of these anonymous numbers are now actually part of the Committee's policy and policy statement. The conclusion is inevitable: Individual meeting participants, acting wholly on their own, can influence monetary policy in the United States. This would be especially true of meeting participants who were not as pure as President Plosser is urging us to be, but who chose, potentially for strategic reasons, to locate their answers near the perceived central tendency of the distribution of policy paths.

What is the response to this? Let me try to deal with this logically. Let's start with two premises. Any Committee release of information about the future path of policy is really a Committee statement about policy. In fact, it is designed to be a Committee statement about policy—that's what forward guidance is about. Second, I can't think about how any Committee statement about policy can proceed without being deliberated upon and voted on by the Federal Open Market Committee.

I am sure Governor Yellen is going to accuse me of letting the best be the enemy of the good here, but what we have to be thinking about is a collective forecast of policy rates. By collective, I mean the release of this collective forecast needs to be voted on and approved by the voting members of the FOMC as part of its monetary policy statement. I would think about doing this not at every meeting, but four times a year when we are currently releasing a collective forecast. The central tendency of the Norges Bank's release is what I have in mind.

There is this perspective that this is impossible, given the heterogeneity of viewpoints about the table. We deal with this heterogeneity every time, and the way we deal with it is the staff tries to condense it down into three choices—A, B, and C. What we can imagine is the staff has some path of policy rates associated with option A, some path of policy rates associated with option B, and a path of policy rates associated with option C, and we would vote on those. I don't think it is an impossible task for us to be dealing with this. It is just another part of the policy process. The policy choice right now is infinite dimensional, and we still somehow manage to condense it down to three choices. This would be another element of doing that.

I realize that the subcommittee on communications' staff has put a lot of time into this matter, but we should take our time with this. Forward guidance has been, and will continue to be, a very useful tool for us, but we want to be very careful about getting the right formulation in

practice. This echoes what President Pianalto was saying. The right way to do this would be a collective way instead of trying to summarize information about 17 separate visions of policy. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. I just have one comment. This morning some argued that financial problems should make us less willing to ease, because they didn't think it would have much of an impact. Others argued that financial problems should make us more willing to ease, because we should offset the problems. Either way, if financial market conditions impact the degree of accommodation that we are going to choose, then we should acknowledge it. This is to be transparent publicly. I would prefer financial stability be included, like it was in the earlier draft. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Otherwise, you are okay?

MR. ROSENGREN. Otherwise, I am okay with everything else.

CHAIRMAN BERNANKE. Vice Chairman.

VICE CHAIRMAN DUDLEY. I want to thank the subcommittee. This is very difficult, and you made a tremendous amount of progress. I support the principles of providing the policy projections in the SEP. However, the information provided by these projections would be even more valuable if it were possible to associate each FOMC participants' projected policy rate with the projected policy paths for output growth, unemployment, and inflation.

While the problem of unconnected information about the participants' path of inflation and real activity is already an issue in the current format of the SEP, when you include the policy projections on top of that, it is just going to exacerbate the problem. In particular, under the current format, it would be unclear why people are outliers in terms of their policy projections.

Is it because they have different views on inflation or real activity? Or do they have different views in terms of the Fed's appropriate reaction function?

Now, you could address this in a number of ways; let me just outline two alternatives. One alternative, which is the more difficult one, is to change what we mean by central tendency projections, so that the central tendency is described across all of the variables of the forecast jointly rather than each variable individually. That is going to be very difficult, because you are going to have to figure out how that methodology works, and how you weight this year's forecast, next year's forecast, and the following year's forecast.

If that's not acceptable or possible, another alternative, which is much more straightforward, is to publish each participant's forecast without attribution. There would be 17 different forecasts identified anonymously for real GDP, the unemployment rate, inflation, and the federal funds rate, or 16 if the Chairman chose to be excluded. I would suggest that we should actually take a straw vote on this to see if there is support for this. I would probably group the 17 into two groups—voters versus nonvoters—because it is relevant to market participants where the outliers lie. That would even provide more information, but that is not essential to this proposal.

In terms of the balance sheet, I certainly support inclusion of the question: Do respondents differ materially from the Tealbook? With respect to publication starting in January, I support that. But my view is that the ultimate objective should be along the lines of what President Kocherlakota proposed, that we really should be trying to, at the end of the day, work for a Committee view, rather than a collection of individual views. That is what our longer-term goal should be.

In terms of the statement, I can support the draft statement as it currently reads. There are a few little changes that I would make. In paragraph 3, I would prefer the inflation objective to be 2 percent “over time,” as opposed to “over the longer run.” That is actually what you are really trying to achieve—to have inflation average 2 percent over time.

Paragraph 5 is a bit vague right now, and that is part of the big-tent problem. I certainly would be open to exploring if there is a way to make it less vague over time. Wherever we end up, though, with paragraph 5, I think the Chairman is going to have to take the lead in explaining what he thinks paragraph 5 means. You have to take paragraph 5, and then explain what flexible inflation targeting means in terms of where you are. If the unemployment rate is high and the inflation rate is high, you are probably going to think differently about things than if the unemployment rate is high and the inflation rate is low. It would be very useful to the Chairman to run through a few examples to take this very abstract paragraph 5 and give it a sense of how the Committee is likely to think about it.

As far as the living, breathing will, it is fine to reaffirm the document each generation. But like the consensus view around the table, I view this as constitutional, and so I would be fixing the bar pretty high for making changes. I don’t think the statement should be up for a vote where we make little language adjustments each year. There have to be real, substantive reasons to make a change to the statement. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. I would also like to acknowledge the work of the subcommittee. This is a difficult task, and I recognize that dealing with me was a big part of the difficulty. [Laughter]

I would like to start at the statement of longer-run goals and policy strategy. With the addition of the paragraph on employment that President Lacker would not have written, I can accept the statement. And I agree that if it's adopted, it should be a living, breathing document, subject to revision, but that is with recognition of the effort that it took to wrestle this beast to the ground the first time. [Laughter] I will not object to its adoption, not in a straw poll, not in an official vote, and not in a speech. That doesn't mean, however, that I think it is a great idea. I still don't see that it adds real clarity to the public understanding of our framework. It will be viewed, for all the intricate language of the compromise, as an inflation target at about the level the public thought it would be.

The subcommittee has carefully drafted this statement to eliminate most objections, including mine. And as heroic as that effort has been, in doing so, I fear they have created a document that is subject to varying interpretations, both in this room and on the outside. And I agree with Governor Tarullo that agreement on the statement doesn't necessarily equate to agreement on principles. So if I don't think it adds information, I do think that it has the potential to stir up political heat on all sides. But as I said, I won't object.

As to the inclusion of the fed funds projections in the SEP, I have similar feelings. I don't object to their inclusion. They will confirm, for all to see, that there is definitely a range of views about the appropriate path of the fed funds rate, and they will provide some clarity about the degree of that variation. But for those who think that publishing these forecasts might signal that rates will be low for a long time, what I see from the sample actually goes in the other direction. Moreover, I think they will limit the effectiveness of any potential statement, such as the one that was offered in option A. It is hard to make a credible statement that the Committee now anticipates that economic conditions are likely to warrant this exceptionally low range for

the federal funds rate at least through the end of 2014, when in fact only four respondents expected the first increase to come later than 2014. Similarly, the projections for unemployment and inflation in those time frames may not line up. As a matter of fact, they did not line up between the language in option A and the sample in the December 2 memo. I am all for transparency in communication. But as we add new information, it becomes nearly impossible to take it back, even if it no longer conveys the message that we want to send.

The additional attention to the SEP that has been achieved in the press conferences is a positive step. But I would caution that as we add more communication devices, such as the statements on exit and long-run strategy, and as we add more information to the SEP and to the meeting statement, that we need to pay attention to the consistency of the message across all of these Committee communications, or we will confuse the public or, worse, lose the credibility of those communications. It is bad enough when we create cacophony as we each speak in our individual capacities about our different viewpoints. It will be an even bigger problem if our Committee communications themselves send conflicting signals. Thus, depending on the contour of the SEP projections that we publish, I can envision scenarios where we might be limited in the forward guidance that we can credibly include in the meeting statement.

I would urge caution, as President Pianalto and President Kocherlakota have suggested, that before we move forward with publishing everyone's individual projections, we also look at the potential for crafting a Committee projection. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Raskin.

MS. RASKIN. Thank you, Mr. Chairman. First, let me say that I share many of the concerns expressed on this draft. I am particularly moved by the expressions of concern about

how interpreting the strategies set out in the text of this draft could cause us to perform less well on one mandate than on the other.

I will try to address this risk first before turning to the broader rationale for supporting this draft. To restate Governor Tarullo's concerns, as well as the concerns of others, as a question: Does this statement urge us to continue on a path where we state allegiance to the full mandate but underperform on the employment side? In short, my anticipation is that the interpretation of the statement could have this result, but the existence of the statement alone should not. Whether there is a statement or not, as a Committee we don't want to adopt a policy thinking that it permits us to act as though we are much more opposed to inflation being modestly above our target than to inflation being a similar amount below our target, or that it permits us to favor parts of the statutory mandate to the detriment of other parts. In other words, we should not adopt a statement that provides a fig leaf for us to act contrary to our statutory mandate. There is some risk embedded in the statement if we use it as an excuse to not act to achieve our statutory mandate. I am sensitive to this risk. But this is a risk that exists regardless of whether or not we adopt the statement. These are the debates around this table, and statement or no statement, they are going to continue to exist. As long as we have a statutory mandate, we are going to be interpreting it and reinterpreting it.

The reason to adopt this draft is to provide more transparency to the American public on the Committee's monetary policy goals. The value of transparency, as I see it, is to improve accountability by spelling out how monetary policy is set to achieve our statutory goals. In a democratic society, public institutions must be accountable for their decisions. We say we need to be independent. But if we want to ensure that monetary policy is well insulated from short-term political pressures, then we need to do everything we can to help the public understand the

rationale for our policy decisions. In effect, we can't make arbitrary choices about whether to provide or withhold such information. Rather, in order to sustain the public's confidence, we should strive to be as transparent as possible in our policy communications.

Of course, we should aim for clarity as well. It would be terrific if we could gain consensus about a loss function, but it seems clear that such initiatives will require substantial time for development and consultation with the Committee. Thus, as Governor Yellen noted in her opening remarks, rather than letting the best become the enemy of the good, it seems very sensible to move ahead with publishing policy projections starting in January, with the understanding that the subcommittee will be exploring other possible SEP enhancements in coming months.

To sum up, the first principle in the statement is not just boilerplate. In particular, while the Chairman has frequently expressed a commitment to transparency in his public communications, I am not aware that the Committee has ever done so in any formal statement. Moreover, it seems inadvisable for the strength of that commitment to depend solely on the Chairman, as though we would be open to the possibility of reverting to a culture of opacity and secrecy sometime down the road. Instead, the entire Committee has before it a historic opportunity to express a commitment to strive for the highest degree of clarity and transparency in the monetary policy communications that are relevant to our country. Thank you.

CHAIRMAN BERNANKE. Thank you very much. Very good conversation and discussion.

On the policy statement, we do appear to be pretty close. We have quite broad agreement, but, as I said, the subcommittee ought to take the comments that were made today

and see if there are any improvements or changes that need to be made and to consult with the Committee.

Some practical issues were raised. In particular, Governor Tarullo raised the question of how best to bring this out into the public. If anyone has any thoughts on that, either now or later, I would be very happy to hear them. I suppose it is a possibility that if we could agree on something in the intermeeting period, I could make some kind of presentation or something before the January meeting, but I don't want to promise or count on that. Let's move forward and see what kind of progress we can make. Suggestions about how to introduce this most effectively would be welcome.

On the issue of the rates, I will take a straw poll in a moment. I do want to emphasize that, as Governor Yellen said, this is a work in progress. This is not the last thing we will ever do. I'm sure there is a lot that needs to be done within the context of the SEP, but also in moving forward toward even better communication devices.

President Kocherlakota, I disagree with you in your characterization of this as individuals making policy. By the same token, we are all setting our own inflation targets, because we all give our long-run inflation value in the SEP. This is, as everyone understands, a survey of current views, and given that appropriate policy is assumed for the projections, it seems complementary to the survey to have that information. But while I share some of the concerns about the practicality of bringing 17 people together in a collective forecast, in principle it is the right way to go, and I agree with you and President Bullard that we should investigate that very seriously and move in that direction over time. Based on experience, it is not going to happen in the next six weeks. It's something we need to work toward over time.

I do think we can preserve the distinction between commitments made by the Committee and those made by individuals. For example, it would be possible for the Committee collectively to decide to make an interest rate commitment that would differ from the sum of all of the individual projections and to state that officially in the statements, and so on. I recognize that is not completely straightforward, but I think that with some explanation it would be workable. Let me, again, assure you that we will continue to look for ways to improve our communication.

While it would be nice to do more work and more experimentation, there is considerable value to putting this out soon. I would like to propose, as the subcommittee has suggested, that we put the rate projections out in the January round. I am going to take a straw vote of the Committee participants. I will ask for yes, no, and abstentions. All those in favor?

MR. FISHER. Of both?

CHAIRMAN BERNANKE. In favor. One, two, three, four, five, six.

MR. TARULLO. What are we voting on here?

CHAIRMAN BERNANKE. We are voting on the rate projections. Seven, 8, 9, 10, 11. Against? No? Three, four. Abstentions? Are you abstaining, Betsy?

MS. DUKE. Yes. My preference would be not to, but I don't object to doing them, as I said.

CHAIRMAN BERNANKE. That's an abstention.

MS. DUKE. That's an abstention. [Laughter]

CHAIRMAN BERNANKE. The debate will be reflected in the minutes and the transcripts, and we should continue this conversation as we go forward and try to find better ways. Let me end on the one thing that everybody around the table agreed on, which was that the subcommittee has done excellent work. We appreciate it. The penalty for good work is they

may be asked to do more work. [Laughter] Again, thank you for that. Any other issues? [No response] Two minor things. First, we did ratify everything. Second, I need to officially announce that the next meeting is January 24 and 25. Thank you all very much.

MS. DUKE. Could I go back to the straw vote and vote present?

CHAIRMAN BERNANKE. Present? [Laughter] Thank you.

END OF MEETING