

**Meeting of the Federal Open Market Committee on  
August 9, 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, August 9, 2011, at 8:00 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, Thomas M. Hoenig, and Eric Rosengren, Presidents of the Federal Reserve Banks of St. Louis, Kansas City, and Boston, respectively

William B. English, Secretary and Economist  
Matthew M. Luecke, Assistant Secretary  
David W. Skidmore, Assistant Secretary  
Michelle A. Smith, Assistant Secretary  
Thomas C. Baxter, Deputy General Counsel  
Richard M. Ashton, Assistant General Counsel

Thomas A. Connors, David Reifschneider, Daniel G. Sullivan, David W. Wilcox, and Kei-Mu Yi, Associate Economists

Brian Sack, Manager, System Open Market Account

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

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

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

Andreas Lehnert, Deputy Director, Office of Financial Stability Policy and Research, 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; Lawrence Slifman and William Wascher, Senior Associate Directors, Division of Research and Statistics, Board of Governors

Andrew T. Levin, Senior Adviser, Office of Board Members, Board of Governors; Stephen A. Meyer, Senior Adviser, Division of Monetary Affairs, Board of Governors

Joyce K. Zickler, Visiting Senior Adviser, Division of Monetary Affairs, Board of Governors

David E. Lebow, Associate Director, Division of Research and Statistics, Board of Governors

Joshua Gallin, Deputy Associate Director, Division of Research and Statistics, Board of Governors; Fabio M. Natalucci, Deputy Associate Director, Division of Monetary Affairs, Board of Governors

Beth Anne Wilson, Assistant Director, Division of International Finance, Board of Governors

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

John C. Driscoll, Senior Economist, Division of Monetary Affairs, Board of Governors

Carol Low, Open Market Secretariat Specialist, Division of Monetary Affairs, Board of Governors

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

David Saperano, First Vice President, Federal Reserve Bank of St. Louis

Mark S. Sniderman, Executive Vice President, Federal Reserve Bank of Cleveland

David Altig, Alan D. Barkema, and Geoffrey Tootell, Senior Vice Presidents, Federal Reserve Banks of Atlanta, Kansas City, and Boston, respectively

Chris Burke, Fred Furlong, Tom Klitgaard, Evan F. Koenig, and Daniel L. Thornton, Vice Presidents, Federal Reserve Banks of New York, San Francisco, New York, Dallas, and St. Louis, respectively

Keith Sill, Assistant Vice President, Federal Reserve Bank of Philadelphia

Robert L. Hetzel, Senior Economist, Federal Reserve Bank of Richmond

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

MS. YELLEN. So moved.

CHAIRMAN BERNANKE. Thank you very much. Before we get down to business, we have a few people to whom we have to say farewell—first, Carol Low. Carol, an FOMC specialist in the Secretariat, is retiring. She’s worked at the Board for only 41 years, begun at age six. [Laughter] She has attended 222 FOMC meetings, which turns out to be the same number that Don Kohn attended. So that gives you a measure—

MR. WILCOX. One Don Kohn unit. [Laughter]

CHAIRMAN BERNANKE. One Don Kohn unit. That’s right. So that’s quite a record. Carol, you’ve been here for many, many years, and we thank you for your service. [Applause]

It was announced yesterday that Nathan Sheets will be leaving the Board to take a position in the private sector, and hence he recused himself from the last meeting and obviously has had nothing to do with this meeting as well. I’m sorry he’s not here to accept our congratulations, but as you know, Nathan did a wonderful job piloting the Division of International Finance through some very choppy international waters over the past few years, and we’re going to miss him and his insights and understanding of the international situation very much. Steve Kamin will be acting director as we try to regroup in International Finance, and we appreciate Steve taking on that responsibility. For the record, let me acknowledge our thanks to Nathan Sheets for his many contributions.

And finally, this is the last meeting for our colleague Tom Hoenig. Tom began attending FOMC meetings in 1991 and has attended a total of 161 meetings, which exceeds the sum of any two other members around the table. The only problem I've ever had with Tom is that I'm unable to get him to say what he really thinks. [Laughter] It's a 20-year record of service through three recessions—I'm not implying any causality—and we have all benefited very much, Tom, from your perspective, your banker's insights, and your wide range of experience.

MR. HOENIG. Thank you. I will note to the Committee that I want to apologize. I had no idea the markets were going to react this way to my leaving. [Laughter]

CHAIRMAN BERNANKE. Well, we will have a chance to make jokes like that at a lunch in your honor after the next FOMC meeting, and I suspect that your retirement might get mentioned once or twice at Jackson Hole. I'm just guessing.

MR. HOENIG. I would imagine.

CHAIRMAN BERNANKE. All right. Tom, thank you. You have our great appreciation and admiration.

MR. HOENIG. Thank you. [Applause]

CHAIRMAN BERNANKE. Okay. Without further ado, let's go to item 1 on our agenda and turn to Brian Sack for a report on financial developments. Brian.

MR. SACK.<sup>1</sup> Thank you, Mr. Chairman. Over the intermeeting period, financial market participants became very concerned about the prospects for U.S. economic growth and had to contend with significant risk events related to the fiscal situations in Europe and the United States. These developments led to dramatic declines in equity prices and interest rates, and they prompted widespread discussion about whether the Federal Reserve will deliver additional policy stimulus.

The increasing pessimism in the market about economic growth prospects was driven in part by the incoming economic data. The data indicated that the economic recovery has been more anemic than had been appreciated, despite the degree of policy accommodation that the Federal Reserve has put in place, and raised questions

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

about the extent to which economic activity will pick up going forward. Indeed, respondents to the Desk's primary dealer survey revised down their GDP forecasts substantially, and most of them saw the risks around that lower forecast as skewed to the downside. The dramatic movements in asset prices in recent days indicate that investors' confidence in the economy recovery has deteriorated even further.

Based on this shift in the outlook, investors lowered the expected path of the federal funds rate substantially, as shown in the upper-left panel (exhibit 1). Current futures prices suggest that the federal funds rate will remain below 50 basis points through most of 2013. A similar revision took place in the policy expectations from the Desk's primary dealer survey. As shown to the right, the perceived likelihood of the timing of the first increase in the federal funds rate target shifted back dramatically, with considerable odds now assigned to 2013.

The revision to the economic growth outlook has also brought the possibility of additional policy accommodation back into the discussion among market participants. The primary dealer survey asked about the likelihood of various policy steps that the Chairman discussed in his June press conference. As shown in the middle-left panel, many respondents placed meaningful odds on those steps over the next year. In particular, changing the "extended period" language, providing guidance on the SOMA portfolio, increasing the size of SOMA, and increasing the duration of SOMA were all given about a 20 percent probability by the median respondent, while cutting IOER was given about a 10 percent probability. The perceived chances of policy actions have likely shifted up notably since the time of the survey, given the deterioration in financial conditions over the past week.

The revision to expectations for short-term interest rates and the possibility of additional balance sheet actions contributed to a notable decline in Treasury yields. As shown in the middle-right panel, the 10-year Treasury yield fell about 60 basis points over the intermeeting period to around 2.35 percent.

The decline in the 10-year yield was driven entirely by its real rate component, as shown in the bottom-left panel. The 10-year real interest rate fell to around 15 basis points—a remarkably low level that reflects the high degree of pessimism among investors about the growth prospects for the economy. At the same time, 10-year breakeven inflation rates stayed relatively high, reflecting in part that inflation has remained elevated in this environment.

The weaker economic growth outlook also caused an abrupt decline in equity prices. As shown in the bottom-right panel, equity prices plunged over the past week or two, bringing the S&P 500 index about 14 percent lower since the last FOMC meeting. Other risk assets also suffered, with high-yield corporate bond spreads widening notably and bank share prices falling sharply. The share prices of Bank of America and Citigroup are down nearly 40 percent and 30 percent, respectively, since the last FOMC meeting, with much of that decline occurring yesterday. Market-based measures of uncertainty surged, with the VIX piercing 40 percent.

Investors' concerns about growth prospects were exacerbated by ongoing stresses in European sovereign debt markets, the subject of your second exhibit. As shown in the upper-left panel (exhibit 2), pressures in European sovereign debt markets intensified over the intermeeting period. This deterioration occurred despite major policy steps taken by European leaders, including the July 21 agreement to provide additional support to Greece and to expand the scope of the EFSF. Mike Leahy will discuss this package and subsequent policy steps in more detail in his briefing.

The initial market reaction to the package was positive, but this response was not sustained. In particular, market participants began to question whether the package provides sufficient safeguards to stem contagion to Italian and Spanish debt markets. As a result, spreads on those securities began to widen sharply in recent weeks, reaching new highs. These conditions led the ECB to begin purchasing Italian and Spanish bonds yesterday, bringing those spreads down significantly. However, there remains a great deal of uncertainty about the strategy that the ECB will employ and the potential scope for those purchases. These purchases are seen as a bridge to the expanded use of the EFSF, which will include bond purchases in the secondary market.

The deterioration in sovereign debt markets once again translated into pressure on European financial institutions, given investors' concerns about the exposures of those institutions to the affected countries. These concerns were amplified by weaker-than-expected European bank earnings reports. As shown in the upper-right panel, the equity prices of major European financial firms have fallen sharply in recent months.

In addition, some European institutions have increasingly found it difficult to borrow in short-term dollar funding markets. As shown in the middle-left panel, there has been a meaningful decline since late June in the amount of commercial paper issued by institutions from Spain, Italy, and France, as money market funds and other investors have reportedly pulled away from these firms. The reliance on short-term dollar funding remains sizable for institutions in France, but these firms reportedly have had to collapse much of this funding into overnight paper in recent weeks.

The pullback of investors from providing funding to these institutions is also apparent in the upward pressure observed in dollar funding rates. As shown to the right, the three-month LIBOR has remained low, but the rate obtained by borrowing in euros and swapping to dollars, a funding practice used by many European institutions, has risen markedly. If the cost of dollar funding achieved through the FX swaps market continues to rise, we could see some use of the liquidity swap arrangements with other central banks, which provide dollar funding at a backstop rate of 100 basis points above the OIS rate.

Overall, the strains on many European financial institutions are intense, and the liquidity positions of some of those firms have become more tenuous. The considerable uncertainty surrounding the course of European sovereign debt markets

and the outlook for these institutions has been an important concern for investors that has weighed heavily on financial markets.

As shown in the bottom-left panel, the euro has held relatively steady against the dollar, as the negative effects from European stresses have been counterbalanced by the concerns about U.S. growth prospects. However, the euro has weakened significantly against other currencies, such as the Swiss franc. The strength of the franc prompted the Swiss National Bank to take actions last week for additional policy accommodation.

Against the yen, the dollar has weakened notably, as shown to the right. This movement led the Japanese Ministry of Finance to intervene in the market last Thursday on a unilateral basis to weaken the yen relative to the dollar. The intervention was sizable and prompted the yen to fall more than 3 percent, although it has since retraced this movement to some degree. In addition, to further support economic growth, the Bank of Japan moved toward additional policy accommodation last week by deciding to expand its securities purchase program.

Financial markets also had to contend with sovereign debt risks here in the United States, the subject of your final exhibit. As I noted in our videoconference last week, the lack of progress toward a credible fiscal package, and the uncertainty that this created about an increase in the debt ceiling, weighed heavily on investor sentiment and caused strains on the functioning of the Treasury market and money markets. Some of these strains improved substantially once the fiscal package was signed into law, but this did not exactly put the U.S. fiscal situation in the rearview mirror for financial markets. Indeed, in recent days investors have been heavily focused on S&P's decision to downgrade the long-term credit rating of the U.S. government.

I will start with some of the dynamics that were observed around the time the debt ceiling was raised. As I noted in our videoconference, concerns about the debt ceiling led money market funds and other investors to move out of Treasury bills, Treasury repo transactions, and some types of bank liabilities in favor of cash deposits at their custodial banks. For the money funds, this decision partly reflected concerns about redemptions by investors. As shown in the upper-left panel (exhibit 3), the outflows from money market funds from July 21 to August 1 were substantial, particularly for funds concentrated in Treasury securities. Since August 1, however, those flows have begun to reverse.

The shift in investor flows is also apparent if we focus on activity at the banks. The flight into bank deposits could be seen in the reserve balances held by some of the large custodial banks, shown in the upper-right panel. Those balances surged as deposits grew, but they too have begun to reverse. This surge in deposits caused some of these banks to worry about their leverage ratios, and one of them last week decided to impose a 13 basis point fee on deposit balances that exceed normal levels for all clients of their custodial services.



This pattern of investor flows has shown through to short-term funding rates. During the uncertainty surrounding the debt ceiling, the Treasury bill curve became distorted. Bill yields in general moved higher over the period through July 29, as shown in the middle-left panel, but the increase was disproportionately large for those bills maturing in August, as investors became concerned about the possibility of delayed payments on those securities and the range of operational and other problems that could result. However, with the lifting of the debt ceiling, the bill curve quickly renormalized, with bill rates currently near zero for securities maturing over the remainder of the year.

Similarly, the repo market has also recovered from the significant upward pressure on rates that was experienced during the debt ceiling impasse. As shown to the right, the Treasury GC repo rate jumped from near 0 basis points to above 25 basis points, driven by the withdrawal of money market funds and other investors that provide funds in this market. Other short-term interest rates were also affected, with the federal funds rate also moving higher. However, both rates have since moved down sharply.

As I noted on the videoconference, the spike in short-term funding rates left the Desk on alert to the possibility of having to conduct repurchase agreements to keep the federal funds rate within the FOMC's target range. This was an extraordinary outcome, given that the financial system has about \$1.6 trillion in excess reserves. In the end, we did not conduct any such operations, as the federal funds rate remained within the FOMC's target range.

This episode caused some deterioration in market liquidity in the bill sector and in the Treasury repo market. However, liquidity in the Treasury market more broadly held up fairly well throughout this period. Indeed, as shown in the bottom-left panel, the bid-asked spread on the 10-year Treasury note remained narrow, although it jumped higher last Friday. Other indicators, such as trading volume and depth of quotes, convey a similar message.

Lastly, let me turn to the recent actions by the rating agencies. The most notable development in this regard was the decision by S&P last Friday to downgrade its long-term sovereign rating for the United States to AA+. The other major rating agencies, Fitch and Moody's, have maintained a AAA long-term credit rating for the U.S. government. However, Moody's has the rating on negative outlook, and Fitch has described the conditions for its rating in a manner that also conveys downside risks.

The decision by S&P appeared to further weigh on investor sentiment and raise concerns about the economic outlook. Indeed, it came at a time when financial markets were already very sensitive to growth concerns and vulnerable to negative news. As shown in the bottom-right panel, equity prices fell sharply yesterday, Treasury yields moved down notably, and the dollar was mixed—extending many of the trends that had emerged in recent weeks.

To summarize, I will simply say that we have had better intermeeting periods than this one. Thank you.

CHAIRMAN BERNANKE. Thank you. Are there questions for Brian? President Fisher.

MR. FISHER. I want to go back to panels 1 and 3 in your exhibits. In your view, from the standpoint of our New York Fed surveys, is there a substantial concentration of people who expect us to either raise rates or shrink our balance sheet in the foreseeable future? When we say “extended period,” it appears to me that these are confirming the fact that it’s really an extended period, not the next one or two months. Is that correct or incorrect from the standpoint of what you hear on the street?

MR. SACK. Well, certainly the path of the expected federal funds rate conveys that. As you note, the dealer survey also asks about other steps in the direction of policy tightening. In addition to what is shown in panel 3, there’s another side of that question, in which we ask about the probability of a number of exit steps. Those probabilities are not that low, and they’re particularly high over the two-year horizon. What you see is a relatively big difference between the probabilities in the one-year horizon and the probabilities over the two-year horizon. So I think the Desk survey suggests that there are decent probabilities being assigned to exit options being adopted within two years, but more likely in the second year.

MR. FISHER. And do you sense that that has increased or decreased over the past few weeks? Just in terms of your gut.

MR. SACK. I would say unchanged to slightly decreased, and perhaps decreased less so than I would have anticipated in the sense that the probabilities over two years are still quite high for many of these steps. We initiated this question in a new form in this survey, and we intend to repeat it in this form. So we’ll have a clear time series to see how it evolves going forward.

MR. FISHER. And as to panel 6, where would you say we are in terms of historic valuation guidelines in terms of the S&P 500, even after this correction?

MR. SACK. Extremely cheap. In fact, I think the dividend yield on the S&P 500 is about equal to the yield on a 10-year Treasury at this point. In our models, the valuations are very cheap, although it's hard to incorporate these abrupt shifts in expectations about the economy into the models. So that makes it hard to assess how much of it is pessimism about growth and how much of it is valuation. I think the big picture here on equities is, obviously, that the move has been very abrupt. Many of us were puzzled by how well equities had held up, given how the macro outlook had been shifting. I think what we are seeing in part is just a catch-up to that more pessimistic outlook, but then one that has intensified as confidence has eroded. We have ventured into a very negative dynamic in the equity market that's given us this very abrupt repricing.

MR. FISHER. Mr. Chairman, I'll remark on that during my comments. I just have one other question for Brian, if I may. And that is, because there is a lot of the chatter in the market about substantial liquidity parked in excess reserves, I just want to understand the dynamics there. Do we know what percentage or what amount of excess reserves is foreign banks versus domestic large banks?

MR. SACK. I believe what we've seen over the past month or two is the foreign bank holdings coming down and the domestic holdings going up. I think this in part reflects some of the funding pressures that have been faced by the European institutions, and that rotation, I believe, has been around \$200 billion. And with that rotation, the level of reserves is about evenly split between domestic and foreign institutions.

MR. FISHER. So 50–50.

MR. SACK. Yes.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. Vice Chairman.

VICE CHAIRMAN DUDLEY. In terms of the stock market, I agree with Brian's view, but there's a different view as well, which is looking at the stock market irrespective of what bond yields are. Just looking at 10-year trailing earnings, the P/E ratio is actually quite a bit above the long-term, historical average. Someone like Shiller would say the stock market is actually very overvalued today. I don't think that's the right way of looking at the stock market, but there is an alternative view of stock valuation that leads to a quite different conclusion.

MR. FISHER. Actually, Mr. Chairman, Bill makes a good point there. This goes back to Ben Graham's original analysis. You know that Shiller did a substantial amount of work in terms of cyclical adjustment. After yesterday's correction, we're at 19 times earnings, and I do want to remind the Committee that things can be worse. The normal valuation is about 19 and a half. We got down to 6.6 in August of '82, 8.3 in '74. So— just to pump up the enthusiasm at this table—I think one of the arguments that might be made is that there is substantial downside left. This is just one of many valuation models that we can look at. I think Bill has a good point.

MR. SACK. Can I add a comment? In terms of your question about reserves, as I noted in the briefing, we are seeing funding pressures emerge. We are seeing a lot more discussion about the potential need for liquidity facilities. I mentioned in my briefing that the FX swap lines could be used, but we've seen discussions of TAF-type facilities in market write-ups. So the liquidity pressures are pretty substantial. And I think it's worth pointing out that this is all happening with \$1.6 trillion of reserves in the system. I think that if we had started without that degree of excess liquidity in the system, what we'd be seeing in terms of these pressures would

be much more severe. But even with that, we're getting to the point where the market feels that additional liquidity injections might be needed.

MR. FISHER. Thank you, Brian. Thanks for your good work.

CHAIRMAN BERNANKE. President Bullard.

MR. BULLARD: Thank you, Mr. Chairman. I just have a brief question on exhibit 1, panel 1, which is "Implied Federal Funds Rate Path." I just want to make sure I understand this. If I'm reading this correctly, the market expects no action until June, certainly summer of 2013. And the other part I want to ask about is, why is this light blue line going down to zero at one year, whereas it's above that today? That seems odd to me.

MR. SACK. Remember that the futures rate is going to reflect the mean of the future distribution of short rates. So, the futures rate moving above 25 basis points in the middle of 2013, that appears to reflect a modal forecast that policy will be on hold and then some risk that that policy could be tightened. Of course, the risks around the short rates are one-sided when you're at the zero bound.

MR. BULLARD. I thought in the past, when we've looked at these, we've looked at the modal prediction, not the mean.

MR. SACK. I was just about to come to that. The Board staff does look at a modal forecast derived from interest rate caps, and what it shows is that the modal forecast is actually farther out. I believe it is unchanged through 2013.

MR. ENGLISH. It's basically flat through 2013.

MR. BULLARD. Okay. Suppose you made a promise, then, to 2013. Would it back up from what the modal expectation is? The modal expectation is beyond that.

MR. SACK. If there were a statement that you were definitely going to tighten in the middle of 2013, then possibly. If there were a statement that you weren't going to tighten until then or later if appropriate, then I would think not. In fact, that reassurance that you were willing to say, "There will be no tightening until 2013, and we'll continue to evaluate"—I think that would probably, if anything, push down the expectations modestly.

MR. WILCOX. Even with a modal rate hanging close to zero through the end of 2013, if you made a promise not to raise by then, you'd be chopping off the upper part of the tail of the distribution. As Brian was saying, all of the risk is to the upside.

MR. ENGLISH. So the mean would move down.

MR. SACK. As for why these rates are at zero, that point is where we splice from the fed funds to the Eurodollars. We have to make a federal funds-Eurodollar basis assumption that's probably a little bit too big. So my guess is that the true implied rates are in the low single digits. They're not actually zero. If they were at zero, there would be a pretty good arbitrage opportunity. But I just interpret that as policy being on hold.

MR. BULLARD. Thank you.

CHAIRMAN BERNANKE. President Hoenig.

MR. HOENIG. Brian, I don't know if I'll ask this question correctly, but it follows up on President Fisher's to some extent. In the conversations we have with the market participants—most markets, like anyone else, talk what they want, or it's not so much about expectations, but the way they form their answers is to guide us to what they want. What kinds of conversations do you have around that? Are they looking for something specific right now—ease because we have to—or are they more up in the air themselves?

MR. SACK. We should keep in mind that dealers are not always long duration. Their positions can be all over the place. There's no bias through which dealers should always want us to do more to lower the interest rate structure. So I don't think the conversations are distorted by their self-interest. I think the conversations that we have reflect their views on what is appropriate for policy to do, given the macroeconomic outlook. I think we've seen the perceived probabilities of all of these policy actions increase, and I would argue they're probably much higher than reflected in panel 3 at this point because those dealers have become much more worried about the outlook. They've seen the substantial tightening of financial conditions, and they think some kind of policy response is appropriate.

MR. HOENIG. But that's not in their self-interest? Or are they able to look beyond that in terms of longer-term outcome? They are dealers and they are working on their own book, and I worry because some of the conversations I've had suggest that their focus is very short term and that they are trying to influence where we come out by how they skew the information toward us. That gives me some pause. But you think they're more objective than that?

MR. SACK. I do because it's not clear that they all have a self-interest in this direction. Dealers are actually short duration in recent months and have been scrambling to cover, according to some data. I will also point out that there are other surveys. Our surveys are limited to the primary dealers right now, but there are broader surveys conducted by others, including Bloomberg. I just read a story this morning that 51 percent of the respondents from the Bloomberg survey expect some policy action this year. So I think what we see in the dealer survey is also reflected in surveys with a broader set of respondents who wouldn't have direct interest in their dealings with the Desk.

CHAIRMAN BERNANKE. I have a two-hander from the Vice Chairman.

VICE CHAIRMAN DUDLEY. As someone who used to do this for a living, let me just say that the surveys are filled out predominantly by economists who sit on the trading desks. They're basically going to write down what they think is going to happen as opposed to what they want to see happen, because they want to basically get it right, and getting it right is what's important to them in terms of their call to the markets.

MR. HOENIG. Thank you.

CHAIRMAN BERNANKE. Any other questions for Brian? President Kocherlakota.

MR. KOCHERLAKOTA. Yes, thank you, Mr. Chairman. Brian, I've been hearing this story, and you had mentioned it as well, about how the downgrade on Friday triggered the decline in equities on Monday. But I'm struggling with putting that together with the fact that Treasury yields went down so much. Is there a story that's going around that tries to rationalize all of that?

MR. SACK. I would actually like to argue that the declines on Monday were not entirely driven by the downgrade. I think they were a continuation of the decline in sentiment and the concerns about economic growth that we had already seen develop very intensely over the previous week. The downgrade did seem to add to those concerns. There could be several reasons for that. For example, one is that it just further reduces the chances of having a flexible fiscal policy response to economic weakness. And I do think that a lot of the pessimism about the outlook is partly related to this idea that there aren't many policy tools to address the weakness in the economy. My point would be that the downgrade just added to that, but I think the primary driver of all this is really the revision to the economic outlook.

MR. KOCHERLAKOTA. Thank you.



CHAIRMAN BERNANKE. All right. Seeing no other questions, we need to vote to ratify domestic open market operations. Can I have a motion?

MS. YELLEN. So moved.

CHAIRMAN BERNANKE. Without objection. Thank you. Item 2, "Economic Situation." Let me turn to David Wilcox to begin the briefing. David.

MR. WILCOX.<sup>2</sup> Thank you, Mr. Chairman. I will eventually be referring to the single exhibit behind the cover that says "Staff Report on the Domestic Economic Situation," though I'll warn you that it'll take me a while to get there. Coming on the heels of a seemingly unrelenting stream of negative news about the pace of the recovery that we received during the intermeeting period, Friday's employment report provided a welcome respite. The unemployment rate was one-tenth lower than we had expected on the eve of the report; private payroll employment increased a little more in July than we expected, and previous estimates for May and June were revised up modestly; and government employment seemed to be on a slightly shallower downtrend adjusting for the influence of the temporary shutdown of the state government in Minnesota.

That said, Friday's report looked good only relative to expectations that had been greatly beaten down in the wake of the previous employment report. Taking a slightly longer perspective that may be more relevant for your purposes, Friday's report portrayed a labor market that is weaker on nearly every important dimension than we expected as of the June FOMC meeting: The unemployment rate was one-tenth higher and the employment-to-population ratio three-tenths lower in July than we projected in the June Tealbook. Private payroll employment increased 105,000 less than expected over the three months ending in July, while for total payroll employment the shortfall relative to expectation was 150,000. None of these changes are decisive, but they all run in the same direction.

Perhaps the best metric of the net change in our assessment over the intermeeting period of labor market conditions is the fact that, even after taking Friday's news on board, we have private payrolls increasing 70,000 less per month in August and September than we had in the June Tealbook, and we have the unemployment rate hanging up near its current level through the end of the year rather than edging down a couple of tenths.

The upper-left panel in the "Forecast Summary" exhibit shows the outlook for the unemployment rate that we presented in the August Tealbook (the black line) compared with the June Tealbook (the dashed red line). As you can see, we rotated up the trajectory of the jobless rate over the entire forecast period. Had we known about Friday's employment report in time for the Tealbook, we still would have

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<sup>2</sup> The materials used by Mr. Wilcox are appended to this transcript (appendix 2).

shown most of this upward revision. But I want to underscore one aspect of the projection that is not apparent from this chart. Between now and the end of next year, our baseline outlook has the measured unemployment rate declining about  $\frac{3}{4}$  percentage point. But the bulk of this decline does not represent an improvement in labor market conditions. We expect the extended and emergency unemployment benefit programs to phase down next year, a development that would—by itself, by our reckoning—bring both the short-run effective NAIRU and the actual unemployment rate down about  $\frac{1}{2}$  percentage point. Thus, in the August projection, the unemployment rate gap narrows by only about  $\frac{1}{4}$  percentage point over the next six quarters.

The upper-right panel shows our revised outlook for the growth of real GDP. I will spare you a detailed recitation of the data that caused us to mark down the GDP outlook by as much as we did, and simply observe that the forecast revision reflects a more negative assessment on both the supply and demand sides of our projection. On the demand side, the downward revision is concentrated in personal consumption expenditures and business outlays for equipment and software. In those two areas, the news has run to the soft side of our expectations pretty much across the board: Recent readings on spending itself have been disappointing, income is on a lower trajectory than previously thought, and sentiment among both households and businesses has slumped. Perhaps the most worrisome illustration of that slump is the July reading on consumer sentiment from the Michigan survey, which came in at the lowest level for that series since early 2009.

In our August projection, we have real PCE accelerating from almost no change in the second quarter to a modest rate of growth in the second half of this year—a pattern that is heavily influenced by the swing in the availability of autos, especially Japanese nameplates. On the business side, we now have outlays for equipment and software increasing at a more moderate pace than before, largely driven by the usual accelerator response to the more subdued outlook for overall activity and business sales.

Turning to the supply side of the projection, the major event during the intermeeting period was the annual revision to the national income and product accounts, which showed that output growth over the period from 2008 to 2010 had been about three- to four-tenths of 1 percentage point slower, on average, per year than previous estimates had shown. In thinking about how to adjust our estimate of potential output in response to these revised data, we started by assessing whether there were existing tensions on the supply side of our projection that might be addressed by the revisions. In this regard, our assessment of the NAIRU from our analysis of Beveridge curves still seemed sensible to us, and there were no significant tensions in Okun's law or in the relationship between the unemployment gap and inflation in the pre-revision data, suggesting that our previous estimate of the output gap provided a reasonable take on resource utilization in the economy at the end of 2010. In contrast, we were concerned that the downward revision to labor productivity implicit in the revised NIPA data would have left the level of productivity implausibly below its structural level in 2010 if we did not adjust down

our estimate of the underlying trend rate of growth in multifactor productivity. Similarly, results from a more formal statistical analysis using a state-space model of the supply side of the economy that takes into account these relationships as well as others suggested that most of the downward revision to output reflected a lower level of potential. Thus, without any compelling reason to alter our unemployment rate gap and given the results from the state-space model, we adjusted down our estimate of potential output in line with the downward revision to GDP, effectively preserving the output gap at the end of 2010.

In this interpretation, the revised data also suggest that trend multifactor productivity growth has been more stable at around 1 percent than seemed to be the case before. We carried that flatter profile into the forecast period and so are now showing potential GDP growth that is two-tenths slower in 2011 than before and three-tenths slower in 2012. To a close approximation, these reductions in potential GDP growth show up one-for-one in our projections of actual GDP growth, and so they account for a significant fraction of the overall downward revision in real GDP.

Had the spate of disappointments during the intermeeting period been the first of its kind in a while, we might have been more inclined to shrug it all off. But as John Stevens highlighted in his briefing for the Board yesterday, the disappointments of the past few weeks extended a fairly lengthy run of bad news rather reminiscent of the losing streaks of the Chicago Cubs that I was used to while growing up. So rather than shrugging it all off, we attempted a more thorough investigation of the mechanisms that might account for why the pace of real activity has fallen so far short of expectation this year. We came up with several possible explanations, all of which are referenced in the Tealbook. Of those, I want to highlight just one here—the possibility that the shocks that hit the economy in recent years have had a much deeper and more persistent effect on demand than we have built into the baseline forecast. For example, it could be that attitudes among households have changed in a way that is much more negative for their spending even than might be indicated by the usual measures of overall sentiment or confidence. The lower-left panel in your exhibit shows one series that has captured our interest of late—a diffusion index created using responses to a question from the Michigan survey about expected household income growth over the next 12 months. During the most recent recession, these expectations behaved in a manner far outside the range of previous experience. Most sobering of all is the fact that this index remains essentially as low as it was around the trough of the recession. This index certainly raises the question as to whether pessimism among households might become, to some degree, a self-fulfilling prophecy, in which consumer pessimism begets weaker-than-normal spending, weakness in spending begets weakness in hiring, and weakness in labor markets in turn validates the initial pessimism among households.

Since the Tealbook closed, the forces shaping the macroeconomic outlook have changed quite a bit. As of last night, the stock market was down about 12 percent relative to our assumption, and Treasury rates had dropped a little more than  $\frac{1}{4}$  of 1 percentage point, oil and natural gas prices had plunged, and the dollar had either changed little or strengthened slightly. A very, very preliminary reading is that these

changes might have relatively little net effect on the growth of real GDP over the rest of this year as lower oil prices provide an offset to the lower stock prices. But in 2012 and 2013, the net effects turn distinctly more negative, as the wealth effects gain greater traction, perhaps on the order of one-fourth to three-tenths or four-tenths of GDP growth in each of those years. I should stress, however, that this accounting is both preliminary and likely incomplete, as it does not account for any confidence effects that seem plausible to follow, unless the changes in the past few days are quickly reversed.

Finally, let me briefly discuss the risks to the outlook. In June, we saw the risks to real activity as skewed to the downside. Today, one could ask whether, with the downward revision to the baseline, we might now see the risks as more evenly balanced than before. I am inclined to think not. While there is, without doubt, upside risk to the forecast that we put before you, the downside risks are surely easier to name. As Mike will discuss in a moment, the potential for the situation in Europe to darken further seems more palpable today than earlier. The fragility of our own financial system seemed all too transparently on display during the past few days before the debt ceiling deal was struck and then again in the past few days. And the potential for the malaise among households to intensify and spread more decisively to businesses cannot be minimized.

A different way of approaching the issue of downside risk is to focus specifically on the possibility that the economy might fall back into recession. Stochastic simulations of FRB/US in which errors typical of the past 40 years are applied to the staff forecast suggest only an 11 percent chance that real GDP will decline in two consecutive quarters between now and the end of 2012. A similar exercise calibrated to the historical accuracy of the staff GDP forecast over the past 30 years suggests a little more risk—a 16 percent chance of a two-quarter contraction in real GDP sometime during the next six quarters.

But it's also possible to generate more worrisome results. For example, my colleague Jeremy Nalewaik has been working with a range of different Markov-switching models, according to which economic activity spends most of the time in a "high growth" state but from time to time drops to a "low growth" state. The models in Jeremy's stable differ according to how many states he allows and what economic indicators he shows to the model. The series that I show in the lower-right panel of your exhibit comes from a model in which Jeremy allows for three states—high, intermediate, and low—and the model forms its judgments about the pace of activity based on three quarterly series—the growth of real GDP, the growth of real GDI, and the change in the unemployment rate. As you can see from the rightmost observation, this model puts the probability that the economy was in recession in the second quarter at a disquieting 25 percent. Moreover, rolling the Markov chain forward one quarter, Jeremy finds that according to this model, the probability that the economy is in an NBER-type recession in the current quarter is 30 percent.

My guess is that these probabilities from the Markov-based machinery are too high because the model isn't aware that output was held down temporarily in the

second quarter by the effects of the disaster in Japan. But we ran a counterfactual experiment in which we told the model that real GDP growth had increased at the roughly 2 percent pace that we think would have prevailed in the absence of the disaster in Japan. Even in that case, the model puts the probability of recession in the second quarter at 20 percent, only 5 percentage points less than the baseline result. At the same time, I would caution that there is a case to be made that the probabilities derived from FRB/US and the staff forecast errors may be too low. For one thing, there are many quarters in which the NBER deemed the economy to be in recession and yet real GDP increased, so framing the issue to FRB/US in terms of two consecutive quarters of negative GDP growth biases the answer toward suggesting too few adverse events. And for another thing, FRB/US may not sufficiently capture the kinds of nonlinearities that seem to emerge when the economy is headed into recession.

Turning to the inflation side of the projection, core inflation once again surprised us slightly to the upside in the most recent reading. With a logic that's reminiscent of our behavior on the real side, we responded to this extension of the string of upside surprises by extrapolating forward into the next few months a little more of the bulge in inflation that we think has been induced by transitory factors, including commodity prices, import prices, and motor vehicle prices. Nonetheless, we maintain the view that these pressures will ease through the second half of this year and into next year. As shown in the middle-right panel, with inflation expectations remaining well anchored, resource utilization remaining well below normal, and transitory upward pressures on inflation easing, we have core PCE price inflation drifting down to 1½ percent next year. At the time of the Tealbook, we had energy and food price pressures abating as well. However, since then, oil and natural gas prices have not "abated"; they've plunged. If those lower prices were to persist, they'd be enough to take a little more than ¼ percentage point off our projection for overall PCE price inflation this year, shown in the middle-left panel, bringing the four-quarter average down to about 2 percent. For next year, we have top-line PCE inflation running roughly in line with core at 1½ percent. Mike Leahy will continue our presentation.

MR. LEAHY. Thanks, David. As Brian and David have already described, the prospect of slowing economic growth has been an important factor behind recent financial market developments, with disappointing news from the United States and the euro area dominating the formation of sentiment. Elsewhere, however, the news has not been so bleak. In aggregate, our outlook for foreign economic growth was revised down some from our forecast in June but still calls for solid growth going forward.

The drama in Europe has shared center stage with the U.S. fiscal debate in recent weeks. When you met in June, markets were awaiting votes on Greek fiscal austerity measures needed to secure EU-IMF disbursements and avoid a disorderly default on upcoming debt payments. With the passage of those measures, peripheral European spreads narrowed in early July and financial markets rallied, but they soon turned down again as European leaders publicly debated the extent to which private creditors should contribute to a new financing package for Greece.

Markets rallied temporarily once again around the time of the European leaders' summit on July 21. The plan announced at the summit provides some additional financial support for Greece, but it ultimately fell short of turning the tide of market skepticism, largely because it fails to provide for the much larger risks presented by Spain and Italy. The plan offers Greece €109 billion in new official funds and calls on private creditors to contribute as much as €106 billion, on net, via debt exchanges, debt buybacks, or rollovers of maturing debt over the next nine years. If implemented in full and if Greece's fiscal and privatization targets are met, Greece's need for market funding should be minimal until 2014. In addition, the package substantially lowers the interest rate on official loans, thereby easing Greece's debt service burden. And finally, by pressuring private creditors to extend and/or reduce their claims on Greece, the plan crosses the line into selective default but does so in a manner that avoids triggering CDS default clauses and adding that disruption to financial markets.

Notwithstanding these strengths, however, we do not believe the plan will secure a lasting reduction of financial stresses in peripheral Europe. For one, the plan fails to reduce Greece's debt service burden sufficiently to ensure sustainability, meaning that further restructuring will likely be needed sometime down the road. More importantly, however, the plan stops short of a measure widely viewed as crucial—an enlargement of the euro area's emergency lending facilities sufficient to provide a credible liquidity backstop to Spain and Italy. This shortcoming is particularly worrisome, as over the intermeeting period, sovereign spreads on Spanish and Italian debt rose very substantially, indicating a clear spreading of the crisis beyond Greece, Ireland, and Portugal. As Brian has mentioned, these worries have now drawn in the ECB, which yesterday began purchasing Spanish and Italian sovereign debt in the secondary market, to help contain those yields, at least for now.

With financial stresses in peripheral Europe now much deeper than in June and unlikely to abate substantially anytime soon, we have further downgraded our outlook for economic performance in the euro area. The expansion of euro-area GDP slowed from an unsustainably fast 3.4 percent pace in the first quarter to an estimated 1½ percent rate in the second. With credit conditions still tight, consumer confidence sliding, and governments tightening fiscal policy in response to investor concerns, we now see euro-area growth falling further, to about 1 percent over the remainder of this year, and moving up only anemically thereafter.

By contrast, we are cautiously optimistic about most other regions of the global economy. To be sure, total foreign growth slowed markedly in the second quarter to an estimated 2¼ percent from 4¼ percent in the first. But this slowing, while a bit more pronounced than we had anticipated in June, appears to reflect in part some transitory factors. Many economies were growing well above a sustainable pace in the first quarter—for example, growth in Hong Kong, Taiwan, and India hit double digits—and some moderation was clearly in order. On top of that, the catastrophe in Japan led to the disruption of supply chains and manufacturing throughout the world in the second quarter, but that effect will not persist. Second-quarter activity was also held down by oil field fires in Canada and, of course, the Royal Wedding in the United Kingdom.

Going forward, we see aggregate foreign growth rebounding to more than 3½ percent in the current quarter and settling in at a little under that pace for the rest of the forecast period. Japan's recovery from its earthquake, including the positive effects on other economies from the restoration of global supply chains, accounts for nearly all of the 1½ percentage point rise in economic growth we anticipate between the second and third quarters. We are reasonably confident about this part of the story, as Japanese industrial production and exports are rebounding more rapidly than we had anticipated in June. It is also heartening that, even as economic growth slowed in many economies in the second quarter, domestic demand has held up: In Canada, employment has been posting strong gains and investment intentions have remained buoyant, even as weak exports and disruptions in the oil sector have restrained output; growth in credit and retail sales remains brisk in Brazil; and the slowdown in China, where authorities have cracked down on bank lending, should still leave Chinese GDP growth skimming along at more than 8 percent this year and next.

Nevertheless, we are hardly complacent about the foreign outlook. Purchasing managers' indexes around the world, even in emerging Asia, declined further in July, highlighting some significant risks to our projection of a rebound in growth abroad this quarter. Moreover, another critical factor in the projected global rebound, the pickup in the U.S. economy, is somewhat tenuous, as David has emphasized. In fact, the weaker outlook for the United States, along with the deeper financial strains in Europe, have led us to revise down by ¼ percentage point our projection of aggregate foreign GDP growth during the forecast period. The turbulence in global financial markets, which became even more pronounced after we closed our forecast, strengthens the possibility that we may be downgrading the outlook further by the time you meet again in September.

Largely reflecting concerns about global economic growth, the price of WTI crude oil fell another 13 percent during the intermeeting period, including the sharp declines of the past few days, putting it nearly 30 percent below its April peak. Declines in oil and other commodity prices have led to declines in headline inflation rates around the world in recent months. With the combination of weaker prospects for economic growth and diminishing price pressures, expectations are that major central banks will delay their plans to withdraw monetary accommodation. This includes, of course, the ECB, which had raised policy rates in July but left them unchanged at its meeting last week. The ECB did expand and extend its offerings of special liquidity facilities in response to the tensions in financial markets last week. In addition, as Brian noted, the Swiss National Bank and the Bank of Japan, whose currencies have risen to record levels, each announced easing actions last week. The Bank of Japan announcement came on the heels of Thursday's massive intervention sales of yen in the foreign exchange market by Japan's Ministry of Finance. By contrast, central banks in several emerging market economies continued to tighten monetary policies to bring down inflation and ward off economic overheating.

So far, the slowdown in foreign growth has left a relatively shallow imprint on U.S. exports. Real export growth moved down from 8 percent in the first quarter to

6 percent in the second, below what we'd written down in June. But import growth also slowed, to only about 1 percent, so that the contribution of net exports to GDP growth was a still-solid  $\frac{1}{2}$  percentage point. Going forward, we are projecting another  $\frac{1}{2}$  percentage point contribution in the second half of this year, as both export and import growth rebound, and  $\frac{3}{4}$  percentage point in 2012. These are much stronger net export contributions than are usually seen during U.S. recoveries, largely reflecting a faster bounceback in foreign economies and previous and prospective declines in the dollar. Over the past year, the broad real dollar has depreciated  $8\frac{1}{2}$  percent, and we are projecting it to move down at an annual rate of about a  $2\frac{3}{4}$  percent during the remainder of the forecast period. Thank you.

CHAIRMAN BERNANKE. What do we think is the GDP effect of the Royal Wedding?

[Laughter]

MR. LEAHY. Well, I don't have the exact numbers split out, but we did see GDP drop from about 2 percent to about  $\frac{3}{4}$  percent between the first and second quarters.

CHAIRMAN BERNANKE. Another failure of fiscal policy, no doubt. [Laughter] Any questions for our colleagues? President Fisher.

MR. FISHER. I have one question for Mike and one for David. Mike, you talked about the widening of spreads. You mentioned Italy and Spain. You did not mention France. This is something that I raised last time. I believe the spreads have widened somewhat in France.

MR. LEAHY. Yes.

MR. FISHER. I'm hearing more noise about concern about the French fiscal situation, in addition to their bank exposure. Could you take a minute to comment on France? Is this something serious, or is it something that people are just piling onto as they look for other problems?

MR. LEAHY. Well, I think there may be a little of both there. The spreads of French longer-term bond yields over German bund yields have gone up some. There have also been rumors about downgrades for France circulating in the market. I don't really know how much truth there is to those rumors, but there are rumors. We have seen some funding pressures for



some French financial institutions— cutbacks on credit lines and such, and paying higher spreads in overnight funding markets. The pressures are nowhere near the same degree that we're seeing, say, for Italian or Spanish banks, but they're creeping up and it's something to watch.

MR. FISHER. Very quickly, David, we seem to be lurching back and forth—all of us, by the way; not just Board staff, but Bank staff as well—in terms of our outlook for the economy. And we're constantly asking ourselves, what have we been missing, or what did we miss, and how useful are our various models, depending on their degree of sophistication, in terms of being of assistance to us in trying to get a sense of what's developing in the economy? I wonder if, at some point—we may not do it now, but it strikes me that one of the issues that I don't think we understand very well—this is my working hypothesis—is how our models are affected by overall deleveraging. Consumer sector deleveraging, for sure. Certainly a releveraging has taken place in the business sector amongst corporate credits, and, right now, what I expect to be a significant deleveraging is happening in the fiscal sector—that is, with the federal, state, and local governments. This is just really a request that we pursue this a little bit more. I see by your nodding of your head, I think I may be correct. But I do think it's something that's inhibiting our understanding—a better understanding of this would probably enhance our understanding of what's going on with the economy.

MR. WILCOX. Yes, I think the only part of your statement that I would take exception to is the pejorative word “lurching.”

MR. FISHER. Well, I didn't mean that in a pejorative sense. I mean, we're trying to come to grips, let's put it that way.

MR. WILCOX. We've been marching determinedly in a negative direction. John Stevens had a nice exhibit in yesterday's Board briefing that showed just how much we'd taken

the forecast down over the course of this year. Also, I want to just emphasize that I think the gaps in our understanding of the interactions between the financial sector and the real sector are profound, and they have, over the past few years, deeply affected our ability to anticipate how the real economy would respond, and they are continuing to do so now. This is an ignorance that we share with the entire rest of the profession, and I think one thing that is good to see is the enormous amount of work that's going on at the Board, in the System, and in the profession at large in an attempt to develop a better understanding of the interactions between the real sector and the financial sector, operating in both directions. But boy, I don't know whether that literature is in its infancy, but I would not put it at any more beyond toddlerhood. We've got just an enormous amount yet to learn and incorporate in that regard.

CHAIRMAN BERNANKE. President Fisher, as I'll mention at the end of the meeting, this is going to be part of a special topic for the FOMC coming up pretty soon. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I have a question for Dave Wilcox. In your discussion of unemployment, do you have an explanation for the decline in participation that we've been seeing? What are the underlying forces causing that decline?

MR. WILCOX. It's hard to know. We've been surprised how weak it's been. We think it's importantly driven by demographic or structural factors associated with the aging of the population, but it's also pretty clear that there's an important cyclical component. And there's a lot of disagreement, some disagreement among members of the staff here at the Board, lots of controversy in the economics profession. Getting that decomposition right is very difficult. But I'd like to ask Bill Wascher to comment.

MR. WASCHER. Well, I guess I don't have a lot to add to what you've just said. We do think there's a significant downward trend in the participation rate that's been associated with the aging of the population, and that's been going on for a while now, for the past decade or so. We think there's a cyclical component to the low participation rate that's associated with the lack of job opportunities and some people dropping out. That's offset to some degree by the extended unemployment insurance benefits, which we think are keeping some people in the labor market who would have dropped out in the absence of those benefits. But that cyclical component is pretty big now. The unemployment rate is quite high; the labor market's very weak. And I think a number of people have dropped out because they've become discouraged about job prospects. But as David noted, I think we're a little surprised by how low the participation rate is, and we're not quite sure why. Much of the surprise is in the teenage categories, and that's always been an age group that's been difficult to understand. [Laughter] The participation rate is a few tenths lower than what we would have expected, given our models. And we're not quite sure whether that extra few tenths is just a bigger cyclical effect than we normally would see, given the labor market slack more generally, or whether there's something special going on for teenagers or for some other particular age group that we don't quite understand yet.

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. Just to follow up with that a little bit. In terms of the people who are dropping out of the labor force, you mentioned teenagers. What about the 55- to 65-year-olds? Are there people who have lost their jobs, with a large fraction of them just saying, "Well, I'm never going to get another job. I'm going to go ahead and take retirement and move out"?

MR. WASCHER. For that group, the participation rate has actually edged up, I think, a little bit.

MR. PLOSSER. Oh, is that right?

MR. WASCHER. That effect could be going on, and some people might just get discouraged and take early retirement. I'm sure that's true for many people. But there are others who have lost a lot of wealth, for example, in their 401(k) retirement plans, and they can't afford to do it, so they're staying in. And more generally, in terms of the longer-term trends, older people are healthier and, I think, more generally likely to stay in the labor market longer. That has only a small offset to the aging of the population because their participation rates are quite a bit lower than for the prime-age individuals. But that does go the other way in a longer-term sense, in general. And those factors are offsetting, I think, in the current environment.

MR. PLOSSER. Thank you.

MR. LOCKHART. Mr. Chairman, a second question for Dave Wilcox. I think I heard you mention that the rebound in auto manufacturing or assembly in this country in the second half that you anticipate is associated a lot with Japanese nameplates. Was that the comment? And do you mean by that foreign nameplates? Does that include Koreans and others? Or is it really specific to Toyota and Honda?

MR. WILCOX. I think, and Larry can correct me, that it's specifically Japanese nameplates. We've seen days' supply, for example, for Japanese models just plummet to extraordinarily low levels. This is one of the relatively few aspects of our projection that's actually stayed on track. Toyota's quite confident about its ramping up its production. Honda's been running a little behind, but on net, its ability to ship autos to the United States has come in about in line with expectations. We don't have final assembly data yet for July; we'll get that in the next couple of days. At this point, we're expecting a 10 percent increase, not at an annual rate, in motor vehicles IP, so that's going to provide an extra five-tenths to top-line IP growth in

July. It's a big piece of our output projection for the very near term. And we think that consumer spending in the second quarter was held back simply by lack of availability on dealer lots. And one might have thought that they'd go next door and shop for a Chrysler or something else, but they seem not to have done that. Those other domestic nameplates had very soft sales in the second quarter as well, so we're still thinking that that story is in place for the moment.

MR. LOCKHART. Thank you.

CHAIRMAN BERNANKE. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. This is a question for Mike Leahy about the international work. Your description suggested that expansion of the European Financial Stabilization Facility was a key issue. Stories that I've heard out of Europe are that that was not expanded on the grounds that it might incite panic. Perhaps that was unwise, but can the fund be expanded? If it is, would that solve the problem or not? And what should we expect as a Committee going forward on that issue?

MR. LEAHY. I think the markets clearly were looking for, and many others were also looking for, some greater political commitment to resolving the debt crisis that seems to be spreading around the euro area. That took the form, for the most part, of the EFSF. Right now, it isn't even fully funded at this point, but it's slated to have €440 billion. And the July 21 plan expanded the range and scope of operations that it could do to try to provide more assistance to countries, but they did not expand the size of the fund. And €440 billion is just not enough if we run into problems in Spain and Italy, who seem to be the next in line.

Ultimately, the European situation is just really difficult—the debt burden is too high, there's going to have to be some losses taken, and they have to decide how they're going to allocate those. Is it going to be done in a disorderly default, and they recover from that, or is it

going to be socialized, in a sense, through government support? And the Europeans have said that they're going to do what it takes to hold things together and provide the funds, but it's not obvious that the political rhetoric is being supported yet by the political decisionmaking. So there is a way out, perhaps, but it's difficult in one respect because the governments have too much debt. They need to cut back. It's the same situation for the United States, I suspect. Cutting back in the near term is going to slow economic growth and puts them in an even worse situation. And it's very difficult for them to commit to cutting back in the longer run, so it's just very tricky. And we're in one of these multiple equilibrium situations, where if the markets can believe them, the rates might come down and they'll get through, but if they don't, it could be a little messier.

MR. BULLARD. Thank you.

CHAIRMAN BERNANKE. President Hoenig.

MR. HOENIG. Thank you. Dave, I think I understand, but the equipment and software revisions that you did were pretty drastic, and given the balance sheets of some of the industry, this has to be, then, driven by confidence. But my other question is, where are they redirecting this to? Just Treasuries, or are they going overseas with it? Because the BRIC countries still have demand growing—would they be investing there? To see this kind of a drop-off, you wonder what their thinking is and where they're going with this. Do you have any sense of that in any discussions you've had?

MR. WILCOX. I don't have a detailed sense of what they're doing with the liquid assets that they've been accumulating. We've spent a lot of time debating whether this is, to some degree, the new normal. We think that those assets are substituting for other forms of liquidity. I don't remember who it was who presented a nice briefing sometime in the past month or so that

talked about the fact that these liquid assets that have drawn a lot of attention are a substitute for other forms of financial buffers that firms have been holding.

MR. REIFSCHNEIDER. Bank lines of credit, for example. Unused commitments.

MR. WILCOX. I guess I'd say that the downward revision to E&S is certainly notable, but by and large, it's a pretty standard response to just a markedly softer general macroeconomic outlook. The climate that businesses are facing is going to involve a lot less growth in business sales, and therefore we think they'll be motivated to build a smaller stock of E&S capital. That's mostly what's going on.

MR. HOENIG. You don't think that much of it is going into foreign direct investment elsewhere?

MR. WILCOX. I don't think so.

MR. HOENIG. I mean, if I were them, I'd be doing something with this stuff, especially given the growth in the BRIC countries.

MR. WILCOX. That could be part of it. But if that is part of it, I don't think it's coming at the expense of domestic investment. And you're right, I think there has been, to be sure, some reduction in business confidence, as reflected in the purchasing managers' surveys, at both the national level and the regional level. So I think there's been, for sure, some wind taken out of the sails there. But we still have E&S growing, now in the mid-single digits, through this year. So to paraphrase President Fisher, it could be worse.

MR. REIFSCHNEIDER. Stepping back from the recession and the slow recovery, it is true that well before we got into the recession there was a longer-run trend of very slow capacity growth in the United States in manufacturing. And that was presumably—and in a lot of cases, you can track it down—growth in China and other places like that. While that's operated in the

background, whether that shifting of production to other countries has really stepped up at the moment is much more difficult for us to say.

MR. HOENIG. Okay. Thank you.

CHAIRMAN BERNANKE. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. I don't know if this is a question or a comment. David, I thought this picture that you showed about households expecting an increase in income was extremely interesting. I'm not sure that I'd be so quick to associate it with a change in demand conditions. If households are expecting a slowdown in potential income growth, maybe even sharper than the markdown that's occurred in the Tealbook, I think if you asked them this question, they would answer it in the same way—that they don't expect as much income growth as they had in the past. While I think it is consistent with the story you said about "Boy, this is showing up as a slowdown in demand," it could also be a sign of the households realizing that potential is just not as good as it was in the past.

MR. WILCOX. Yes, again, this taken alone is not dispositive, but I think that the main takeaway for us from this series is, boy, it looks like there's something going on in the household psyche that has very persistent characteristics.

MR. KOCHERLAKOTA. Yes, I'm sympathetic to that.

CHAIRMAN BERNANKE. Other questions for our colleagues? [No response] Seeing none, we're ready for the economic go-round, and I'll start with Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. Let me say up front that I asked to go first today, not to parse economic data so much as to talk about cognitive dissonance and, specifically, to make a plea to all of us and to remind myself audibly how important it is to resist



the temptation that we all naturally feel to cling to our own past beliefs and predispositions, even in the face of a slew of dissonant data.

For a year or more, I think that the implicit debate in these go-rounds during FOMC meetings has been between those who argued that we are in an economic recovery that would be steady, though unspectacular, with occasional soft patches, and those who argued that we are in a weaker, halting recovery that would take a much longer time to return us to trend points in growth and employment. Well, I think that debate is over. The side arguing steady but unspectacular growth has lost, but it's by no means clear that the side arguing that the recovery was weak and halting has won. I think the meaningful debate today is whether even a weak and halting recovery can continue or whether we're already at or below stall speed and quite possibly slipping into another recession. Equity markets—which, as Brian mentioned, seemed to reflect for quite some time some of the more optimistic sentiment—have, in the past couple of weeks, been marking down economic prospects. Yesterday they appeared to be siding with those who think the most likely scenario is a recession, a probability assignment that strikes me as somewhat high, or at least it would have last week.

Despite the past year's debate in which we've had different views, every member of this Committee is united in having been too optimistic. I think that the most pessimistic among us, of whom I was one, certainly did not expect that growth over the past four quarters would be only about 1.6 percent, and would not have thought so even if we had been told about the impact of Fukushima. Who among us today would stand behind the projections we made last year for GDP growth during this year—and particularly in the second half of this year? Almost none, if any, I suspect.

Most of us, I'm sure, still expect some increase in Q3 growth because of the resumption of auto production that David mentioned a moment ago, but it seems plausible that this impact itself will be transitory. And to the degree that expectations for a pickup in economic growth in the remainder of this year and into 2012 were dependent on some assumed momentum from a decent first half of the year, they are clearly unfounded. It's not immediately clear what other factors will contribute to an acceleration of the underlying pace of growth. Even the most sanguine view of current conditions must acknowledge that the economy is now sufficiently vulnerable that a modest shock could send us back into recession. Needless to say, the euro zone situation described by Mike Leahy a few moments ago could be considerably more than a modest shock. Many of us have been saying for some time that the Europeans had the financial and technical resources to solve their problems if only they would exert the political will. I fear we are fast approaching the point when this will no longer be the case. Plummeting equity markets and tightening financial conditions, along with the blow to confidence they bring, could surely also be more than a modest external shock to what is at best now a fragile recovery.

Like investors rethinking their market positions, each of us needs to rethink our analytic and policy positions to question the assumptions that lay behind our past expectations, and not just to try to fit the most recent data into our prior views. We will, I am sure, spend a good bit of time in future meetings analyzing, in the Tealbook's rather understated formulation, the "forces imposing greater-than-expected restraint on the expansion," into which an honest inquiry is likely to yield challenges to premises and beliefs held variously by most, if not all, of us in the past year or more. This inquiry and the debates around it will surely be important in shaping our policies and response to these forces and eventually in deciding when and how to exit. But I would suggest that there is a more immediate task for us today—that is, to consider just how

perilous the current situation is and then, in light of the dangers identified by that assessment, to consider what measures could be taken to reduce the probability of those dangers being realized. Given that the “steady growth” position has been thoroughly controverted and the “slow but halting growth” position seriously undermined, it seems to me that the cost–benefit analysis of additional monetary policy measures must have changed significantly. After all, both the string of bad intermeeting data and the substantially reduced expectations, not to mention the recent declines in markets, suggest that the factual predicates for our policy dispositions during the past year were, to a greater or lesser extent, misplaced.

Now, the economic go-round in a typical FOMC meeting is a pretty formal, almost—and sometimes literally—scripted affair, and even the policy portion of most of our meetings tends to play out in a fairly structured fashion, and properly so, since proposed language and alternative policy options will quite sensibly have been proposed, modified, and much discussed before we convene. Today, I think, should be different. The cumulative effect of the gathering evidence of stagnation, the psychological impact of the ratings downgrade, the growing concerns that euro zone problems may not be contained, and the global market drama of the past couple of days has made this a potential inflection point. I hope that we can this morning operate in less scripted, less structured fashion so that we can formulate the most appropriate response to the delicate circumstances that confront us for actions that may be taken today or in the coming weeks. I think we need to be a bit more nimble than we’re accustomed to being, and I hope that in the spirit of all of us questioning ourselves, we can do that for the rest of the day. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. Yesterday's equity market selloff certainly gives pause, but I don't think it obsoletes the views that I prepared as long ago as Sunday afternoon, the diagnosis that pertains to the context of policy. I wanted to start by saying that President Bullard in an earlier meeting posed a good question when he asked if there was ever a time in the past 25 years when uncertainty did not seem higher than at other times, and he got quite a laugh when he asked about that. I do think the context of this meeting really does present a lot more uncertainty than whatever the Committee could consider normal. It seems to me that there's simply a lot that we don't know at the moment. We don't know if the growth-restraining effects of the first half will fall away as expected. I think the Tealbook nicely captures the central forecasting challenge of the moment, which is determining the forces responsible for what it calls the "greater-than-expected restraint on the expansion." We don't know whether the consensus base-case forecast of a stronger second half and stronger 2012 will materialize. We're one month into the third quarter, a quarter that the Tealbook projects GDP growth at 3 percent, with little indication in the data of that level of growth. We really don't know how the European debt situation is going to play out in coming weeks. We don't know beyond yesterday's developments and this morning's, if we're tracking them without BlackBerrys, how the market will sort out the implications of the downgrade. We don't know whether the projection of inflation settling out will come true, and we don't really know whether there are underlying forces at work, forces captured in the Tealbook's phrases "persistent spending weakness" and "supply-side corrosion and damage," that portend a longer and deeper problem of sluggish growth.

The outlook, of course, always involves a lot of uncertainty, but it certainly feels to me that the combination of uncertainties at this juncture is unusual. And, at least going into this past

weekend, it inclined me, obviously excluding extreme financial instability, to emphasize an agnostic view regarding the outlook. So I am holding to the base-case outlook that I submitted in my last forecast in June of stronger economic growth and subsiding inflation in the second half, but with less conviction. The BEA's NIPA revisions somewhat changed the narrative in my thinking. The revisions, along with the negative tone of the incoming data, make it harder to sustain my previous forecast. When I submitted my projections in June, I was thinking of restraints on economic growth primarily in terms of commodity shocks and the economic fallout from the earthquake and tsunami disaster in Japan. I think now the list has to be expanded to the uncertainties associated with the ongoing government debt messes here and in Europe. Friday's employment report somewhat took the edge off of accumulating doubts, but at this point, I'm reluctant to entirely dismiss the possibility of an outright contraction, which is also a change in my thinking since June. The Tealbook also references the possibility that "the self-equilibrating tendency of the economy has been greatly weakened by the damage resulting from the financial crisis" and/or that "the economic weakness reflects structural factors" that have lowered the potential path of GDP. I think these are plausible scenarios as well, and they imply much longer periods of relatively slow growth than have been reflected in any of the projections I or the Committee has published at this point. In many ways, that's Governor Tarullo's point. So going into the past weekend and before yesterday's market instability, I felt that a wait-and-see approach to the incoming data over the next weeks or perhaps months is especially warranted.

Now let me turn to input from my District, and once again, there is some contrast between anecdotal reports we've heard and the picture presented by the incoming data. Listening to reports from my directors and business contacts, I find it hard to identify major shifts in overall business conditions in my District. Overall, activity appears to be growing at a

modest pace. Business sentiment has slipped a little since June, but I wouldn't say there has been a significant deterioration in assessment of the near-term outlook of our various boards of directors and affiliated business contacts. In fact, for the most part, the feedback across contacts was not qualitatively different from June. Large firms are still reporting a favorable business environment, while small firms continue to struggle. Improvements in residential real estate have been spotty by property type and region, though overall the housing market remains depressed. Industrial activity is still expanding, but at a softer pace than earlier in the year. Auto producers and sellers, however, are seeing a pickup in activity following tsunami-related supply disruptions, and the expectations for auto production and sales are reported to be favorable for the balance of the year. Consumer spending has slowed, consistent with the national indicators. Retailers continue to note significant differences between upmarket spending, which has been reasonably good, and middle- to lower-income spending, which has been exceptionally weak. Many households appear to be reprioritizing their spending baskets in response to constraints on disposable income and heightened uncertainty. The Atlanta Bank's chairwoman, who represents the country's largest home-improvement chain, reports strong sales across stores, with some emphasis on what might be called "home-value investment spending."

Wage and other compensation pressures in general remain very modest, and commodity price pressure evident earlier in the year has lessened. The capacity to pass through price increases seems to be mixed. The same home-improvement retailer expressed surprise at the willingness of customers to absorb price increases and noted that they expect to test the limits of that willingness over the second half of the year. A firm that represents several thousand grocery products opposite supermarkets said their suppliers will be pushing through price increases in the coming months. A major auto retailer, however, indicated that pricing power has largely played

out in that business. Although a few pieces of anecdotal feedback could cast doubt on the “subsiding headline inflation” scenario, on balance I detected no clear movement of price pressure in one direction or another.

As regards the balance of risks, none of my discussions in the past several weeks have revealed sentiment that the economy is sliding back into a recession, but the tone of these discussions was decidedly cautious, and many acknowledged that the downside risks outweighed those to the upside. I share the view that downside risks to the outlook for economic growth over the near term have risen, and regarding inflation, I still judge the risks as broadly balanced. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I’ll start with some remarks about the Fifth District economy. Recognize that all these are based on reports received before last week’s financial market events. The indicators we have suggest Fifth District economic activity has softened in the past couple of months. Our manufacturing index came in right about at breakeven in June and July, and that’s a level that’s retraced much of the improvement it showed earlier in the year. In the services sector, our Fifth District retail index returned to positive territory, but our nonretail services index remained above even as well. Of the two, the retail index has been more volatile, and comments from retailers in the District continue to suggest a high level of consumer caution. For example, we heard from a supplier of waffle ingredients that while sales at the stores he services are up, average waffle size has taken a hit. [Laughter] Presumably, that means people are ordering smaller ice cream cones and waffles on average. Construction, both residential and commercial, remains fairly weak in most of the Fifth District. Government contracts seem to be the primary source of new, nonresidential work in our District,

and the construction industry is one where we often hear that uncertainty about long-range fiscal policy has a direct effect on them, damping their willingness to invest in equipment or to hire young workers who would need a few years to attain proficiency. Measures of current price pressures in the Fifth District have eased a bit in recent months; expectations about future price trends have declined a bit in services but remain elevated in manufacturing. So the overall picture we get from the indexes and our contacts resembles what President Lockhart reported about the Sixth District: The economy's still growing, but it softened a little bit recently, especially in the manufacturing sector. Caution is widespread, but the mixed tenor of comments is very similar to recent months, and we didn't see any signs of an imminent collapse in activity. However, as I said, these all came from before recent financial market events.

At the national level, there's no question the outlook's deteriorated. The GDP revisions were disheartening. They showed that the contraction was deeper, and the recovery slower, than we had previously thought. One reading is that they increased the odds that we're not returning anytime soon to the trend line that characterized growth in per capita income in the 20th century. Nonetheless, what the revision means for economic growth might be hard to discern. I think it's striking that the Tealbook showed so much confidence in its estimates of the output gap that it translated the GDP revisions, I guess, about one for one in revisions in estimated potential output. We've discussed the notion about output gap at several recent meetings, including during our presentation on DSGE models in June. And how one thinks about the output gap is obviously closely related to the question of whether monetary stimulus is capable of increasing real activity, or offsetting declines in real activity, to any measurable extent.

I don't want to recapitulate that debate, but I want to mention a little bit of recent research at the Richmond Fed that has to do with the elevated level of long-term unemployment coming



out of this recession. The work is by Andreas Hornstein, and it's based on work by Robert Shimer that used data on short-term unemployment, as well as total unemployment, to estimate rates at which workers enter and exit unemployment. And Shimer, who's focusing on short-term flows and short-term fluctuations, found that variations the rate at which workers exit from unemployment predominantly accounted for variations in unemployment. But Shimer's framework doesn't allow for the negative duration dependence—the negative association between how long you've been unemployed and the rate at which you get out of unemployment. Specifically, his model significantly underpredicts long-term unemployment and overpredicts short-term unemployment. What Andreas does is write down—I won't call it a model—essentially an accounting framework that allows for unobserved heterogeneity in the unemployed. He allows two types in this framework, and if you use more data, you can allow more types. And he does that. But one type has a lower rate of exit from unemployment and is more prone, thus, to long-term unemployment. And the other has a higher rate of exit and thus is more prone to coming in and out of the labor market more quickly. The entry and exit rates of these can vary independently over time. They don't have to be proportional or anything. And he allows for the short-term unemployed to change types and become long-term unemployed at a rate that can vary over time. He uses the data on short-term unemployment, less than 5 weeks, and long-term unemployment, 26 weeks or more, to essentially infer all of these transition rates from the data we have.

He confirmed Shimer's finding that fluctuations in unemployment are due mostly to fluctuations in exit rates rather than entry rates. But unlike Shimer, he's able to match, more or less, the elevated level of long-term unemployment. The interesting part of his analysis is that it nests two alternative explanations for the negative duration dependence—the negative

association between how long you've been unemployed and a low exit rate. One explanation is that exit rates simply go down because of the time you spend unemployed. For example, skills are lost the longer you spend outside the workforce or there's some scarring effect. You might call this pure duration dependence, and he captures this with the flows between types—if you start as a good type, you might end up on long-term unemployment. You might change types while you're unemployed. The other source of duration dependence is through unobserved ex ante heterogeneity. When workers become unemployed, some have relatively high exit rates, some have relatively low exit rates. Over time, the ones with the low exit rates are a higher fraction of those who have been unemployed for a long time, so it's essentially a composition effect. His model allows for both types, and he uses the data to just tell him which type of negative duration dependence is going on. What he finds is that the transition between types is negligible, so pure duration dependence, just pure time being unemployed, doesn't seem to be empirically important. Duration dependence instead appears to be more attributable to ex ante heterogeneity among those entering unemployment. Some enter the pool of unemployed less likely to find jobs, and they become a larger fraction of those who remain unemployed for a long time.

So, why is this relevant? Well, I emphasize that this is an accounting framework, so this isn't a fully fleshed-out model of the economy. But the most natural interpretation of ex ante heterogeneity is that it's related to the characteristics of the worker, and the natural thing to think about is skills and labor market mismatch that is brought about by structural change in the economy. And the idea here is that differences in exit rates reflect differences in the degrees to which workers' skills are a good match for employers' needs. According to Andreas's calculations, fluctuations in entry and exit rates for the long-term unemployed have accounted

for three-fourths of the fluctuations in unemployment in the United States over the postwar period. Moreover, the rise in unemployment in 2008 and 2009 is predominantly attributable to the increase in the rate at which long-term unemployed entered unemployment and to the decrease in the rate at which they've exited unemployment. And as I said, between-type transitions are negligible and have made virtually no contribution to the increase in unemployment in this recession. The takeaway is that the rise in long-term unemployment in this recession seems plausibly related to more labor market mismatch—"more ex ante heterogeneity" is the more precise way to say it. Whether that's skill mismatch or not is obviously just an interpretation of the data. Others have made that argument, I realize, but the unique contribution of Andreas's work is that he allows for the possibility of pure duration dependence and finds that its contribution is negligible.

A digression of this sort might seem a bit odd in the midst of the apocalyptic market behavior of the past few days, but I think it's still important for us to focus on understanding fundamentals. A couple of times this morning, "our profound ignorance," I think, was the phrase used about key aspects of how our economy behaves. My guess is that the recent market movements were substantially driven—it's just a guess—by concerns about growth prospects. That seems to be the likely leading candidate. I found it surprising, but the work I described has bolstered my belief that unemployment is disappointingly high and economic growth is disappointingly low for reasons that are related to economic fundamentals rather than insufficient monetary policy stimulus—or insufficient fiscal policy stimulus, for that matter. Right now, the European growth outlook has worsened in light of the political difficulty of constructing a sustainable fiscal regime for the euro area. Amid all of this gloom, I think we can take some comfort from inflation trends. Inflation seems to be headed toward a range of 1½ to 2 percent,

and I think it's worth pointing out that that's quite a bit different—and, I think, better—than the situation we faced last year at this time. And I think that has obvious relevance to our policy discussions, and I'll leave my comments there. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. I'll take a chapter from Governor Tarullo's opening monologue and dispense with the average presentation. I do want to note from my corporate contacts that, regardless of the sector, whether it's rail activity, electricity usage, cargo hauled through the air or on the seas, airline traffic advance bookings, restaurant pricing, or even one of my favorite leading indicators, elective surgery—which, by the way, has declined significantly nationwide, but showing the difference between my District's performance and elsewhere, cosmetic and elective surgery is up in Texas [laughter]—there is no question that we are seeing, in the reports given by business leaders, a mystically stated “slowdown in the pace of play.” Also, in terms of not embracing shibboleths that are dear to some of us, I think I have been reporting that inflationary pressure, particularly as we look at it from a trimmed-mean standpoint, certainly seems well contained and within reasonable bounds. It's not an issue that I find myself preoccupied with any longer.

I must say, Mr. Chairman, I'm a little concerned when I hear people talk about the way the markets—and they're talking about the equity markets, but I think we're also talking about broader market phenomena—have behaved in the past few days. And having been a market operator, working under the strong sense that markets are manic-depressive mechanisms, I think we have to be very careful not to overreact. We do know—as we mentioned earlier in the previous discussion we had, particularly with Brian—that we've had worse periods: '82, '74,

March of 2009. So there is substantial downside here. I would simply say that I think things have gotten worse. I think we have to call a spade a spade.

One of the things that I believe firmly has compounded the pessimism or, put it this way, the lesser enthusiasm I am hearing from my corporate interlocutors—which is one difference I bring to this table; whether it's valid or not is to be decided by others—is that we cannot ignore the fact that the debt ceiling negotiations were an absolute debacle. And we have, if not an incompetent government—and I'm not referring to the Administration, I'm talking about the structure—then certainly one that does not give rise to confidence. Now, I spent 10 days in Italy, away from the lead-up to the congressional vote. By the way, full disclosure: President Pianalto was in Italy also. We were not together; we were in separate parts of Italy. And I was reading the correspondence we had through encryption in terms of possible alternative actions that might be taken in the event of a default. One thing I did not see was any television for 10 days. When I got back, I got off the plane, went to exercise to get over my jet lag the night before the House vote, turned on the television, and scanned through CNN, the networks—even Fox, which I don't ordinarily watch. I was taken aback by the frenetic nature of the discussion, but most importantly by what I felt would be a signal that would be received by average consumers, which is having been told by their President, their congressperson of either party, and their senator that the sky is falling. My immediate reaction would have been to turn to my spouse, if I were an ordinary consumer, and say, "My God, we cannot take this trip. We cannot buy X or Y, and we cannot do this or that." If I were a business leader—and this is what I did hear in my subsequent discussions with CEOs—I'd be standing, arms crossed, legs spread, saying, "Show me. Where is the tax regime going to change? What about the subsidies that I hold so dear for my

industry—that I've lobbied so hard over generations to get? How are spending patterns going to change? And very, very importantly, what are you going to do to me on the regulatory front?"

Here's my point: The problem we have now is, there's no question we've had very weak demand. If you look at mall traffic, which is aspirational goods largely—nothing necessary is sold in a mall—and talk to the interlocutors I talk to, it has dropped to zero from a pace in the first quarter of 3 percent. Off-mall traffic has dropped to 2.6 percent over the past three weeks, largely owing to sales of food, which is a necessity. But there's been weak confidence. There has been a very tenuous—and Governor Tarullo used the term—a sort of “halting” one step forward, one step back; it's not continuous. But we all know it's been somewhat tentative in terms of confidence, and confidence has been undermined. It has not been undermined by monetary policy. It's been undermined by nonmonetary factors. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. The economic news since our last meeting has been dreadful, and it is becoming more and more difficult to ignore the large cracks that have emerged in our monetary policy framework. Accordingly, it's almost impossible for me to present my economic reports in a business-as-usual manner. I suppose that's like Governor Tarullo—going first in a sympathetic fashion. And my comments are based on economic developments that largely preceded the events of Monday and last Friday. So I hope I am not overreacting, as President Fisher was suggesting.

The weak incoming data indicate that it's highly unlikely that the U.S. economy, in the foreseeable future, will achieve anything like a launch velocity, so I certainly agree with Governor Tarullo's comments. For me, the single most significant number was the downward revision to first-quarter GDP growth to 0.4 percent. It now looks as though growth began

slowing in the second half of 2010. It seems to me that's before the emergence of the various temporary factors that we've been pointing to as explanations for weaker growth in the first half of this year. Most of our business and financial contacts are very concerned about continued weakness, both here and globally. Again, that's before Friday and Monday. Many expect a considerable period of below-trend economic growth. They're quite concerned about what seems to be a broad decline in the confidence of almost everyone they deal with, spanning both the household and business sectors. Some of the pessimism appears to be a reaction to the difficulties in Europe, and some has been a reaction to the messy political fight over the debt ceiling in the United States, which presumably has been reinforced by the S&P downgrade of U.S. Treasury debt. And on the part of businesses, the recurring stalls in final demand seem to repeatedly validate their aversion to making significant forward commitments of resources that would result in new hiring or the expansion of capacity.

I suppose there must be some good news somewhere, or else the economy would be in a full-fledged downturn at this point. The Detroit Three automakers are enjoying a better profit environment, which is driven by a markedly lower cost structure, substantially improved sales relative to the depths of the recession, and strong retail prices that have been made possible by price discipline, better inventory control, and the competitive disadvantages accruing to their Japanese competitors. However, the importance of cyclical demand is not lost on the automakers. GM and Ford have already marked down their sales forecasts for 2012 by about half a million units. Auto production plans that remain amenable to changing, like those for the fourth quarter, currently are being reassessed in light of economic developments. Obviously, this includes making contingency plans in the event a new recession emerges, which at least one of them views as a significant possibility. I got a similar message from the big temporary

employment firms. They saw some modest softening of demand in the second half of July, but so far nothing too far out of line with normal patterns. Their main complaint continues to be that their clients remain extremely cautious about starting significant new projects. Furthermore, they note that many firms are nervous about the outlook and are currently able to pull back on hiring on very short notice. Recent developments also suggest that inflation risks over the medium term continue to recede. My reasons for this assessment are unchanged—well known from past meetings—and, I believe, stronger given recent developments and greater forward-looking risks. I continue to believe that inflation over the medium term will underrun our mandate-consistent inflation objective.

I said there were large cracks in our monetary policy framework. The essence of my argument is somewhat simple: Our legally mandated responsibilities are to provide monetary conditions to support price stability and maximum employment. During less conventional times, our standard, Taylor-like approach to policymaking has served us well with respect to these dual mandate responsibilities. This has been true even when inflation and unemployment were unsatisfactory but still within their more normal ranges. And Mr. Chairman, it is my lasting opinion that no one could have navigated the Federal Reserve and the U.S. economy through the recent period of crisis any better than you did. But today's challenges are still severe. A standard way to score our policy performance on our composite responsibilities is to use a policy loss function like the one the Tealbook, Book B, uses in its optimal policy simulations. The next three sentences are somewhat tedious. [Laughter] The simulations put equal weight on squared deviations in inflation from 2 percent, and the unemployment rate from the effective NAIRU, with an Okun's law coefficient of  $\frac{1}{2}$ . That's equivalent to putting weights of 1 on the squared inflation gap and  $\frac{1}{4}$  on the deviation in output from potential. So I think that's somewhat



conservative in the central banker camp— $\frac{1}{4}$  on an output gap relative to 1 on inflation. With this context, here's the simplest statement of our current policy crisis: Today's 9 percent unemployment policy loss is equivalent to an inflation crisis on the order of 5 percent. Does anyone believe we would be sitting on our hands waiting for inflation to come down from such an elevated level as 5 percent? I don't think so. I think we should have the same attitude toward an unemployment rate of 9 percent. The fact that we don't express that same revulsion exposes the very large cracks in our dual mandate policy framework, and I think we really need to discuss that more. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. I was struck over the weekend by how many articles mentioned the word "recession" while describing the economic outlook, and that was before the opening of financial markets on Monday. The memo from Vice Chairman Dudley highlights how much the deterioration in incoming data since the spring has increased the New York Fed's estimate of the probability of recession. Many private-sector economists, using similar models, come to similar conclusions. With real GDP for the first two quarters of the year averaging less than 1 percent, it is not surprising that these models are predicting an elevated recession probability, even ignoring intangibles such as congressional dysfunction, European political dysfunction, and the first downgrade of the United States in recent history.

Recent data have been sufficiently downbeat that a relatively weak employment report is now viewed as a source of good news. Yet, with the employment-to-population ratio the lowest since 1983, there should be little rejoicing. It is interesting to note that even those with higher educational attainment had significant declines in their employment-to-population ratios. When talking to people around New England, I hear that the only bright spot seems to be rental

housing. Buyers not convinced their home prices will increase, buyers with little or no equity for a down payment, buyers no longer qualifying for credit, and possibly a sectoral shift away from homeownership have all contributed to an improving rental market. However, those same factors would indicate that the most interest-sensitive component of GDP, residential investment, is less sensitive to interest rate movements, requiring larger movements to have an effect.

Housing finance is not the only area that has been disrupted. Concerns about the debt ceiling and European financial difficulties have prompted investors to expand already substantial cash holdings. As money market funds have significantly increased liquidity, indicators of dollar funding problems, such as the three-month currency swap rate, indicate an increase in dollar funding problems for European banks. When European banks have trouble rolling funds with money market funds, they often return to the swap market to satisfy their dollar funding needs. Stock prices for European and domestic banks have declined substantially. In fact, Bank of America shares yesterday closed at under \$7 a share, a low not seen since the bad old days of 2009. Their credit default swap rate was over 200. Note that with possible downgrades, uncertainty about lawsuits, and further deterioration in housing prices, there remains a possibility that the next financial shock could still be generated by a large, troubled domestic bank.

Given the large degree of resource slack in the economy, it is quite possible that the inflation rate will soon be falling. Businesses are worried and labor markets are weak—not an environment conducive to increases in prices or wages. The Michigan survey measures of inflation expectations, both short term and longer term, were down. In fact, the Tealbook forecasts that both total and core PCE inflation will hover at 1.4 percent by the end of 2012. Models at the Boston Fed expect inflation to be a bit lower. The evolution of the forecast in the Tealbook since the spring has been striking. The economic growth forecast has been materially

reduced, and unemployment is now expected to remain quite elevated through the forecast period. Inflation is forecast to remain well below 2 percent in the medium term. I unfortunately concur with this outlook. I fear that, in fact, we are currently underestimating the risk of a recession, given the change in domestic and foreign financial conditions. I concur with Governor Tarullo that this may require a more flexible and innovative approach to our policy discussion. Thank you.

CHAIRMAN BERNANKE. Thank you. It's 10:00, and I understand coffee is ready. Why don't we take 20 minutes and come back at 10:20? Thank you.

[Coffee break]

CHAIRMAN BERNANKE. Okay. Why don't we recommence? President Plosser, if you're ready, you're up.

MR. PLOSSER. Thank you, Mr. Chairman. Business conditions in the Third District continue to improve modestly since our last meeting, but the pace of that economic expansion is slower than earlier in the year. Payroll employment growth for the region remains weak. July employment data for the states won't be released until the middle of August, next week sometime, but in June the unemployment rate for our three states moved up to 8.4 percent—still significantly below that of the nation as a whole. Manufacturing activity in the region firmed a bit in July but remains weaker than we saw earlier in the year. Our BOS general activity index moved back into positive territory after being at a rate of negative 7.7 in June. It moved up to 3.2 in July. The indexes of future activity moved up considerably, indicating more optimism about future conditions on the part of District manufacturers. One supply shipper I talked to on Friday said that volumes had fallen off the cliff after early in the year, particularly in May and June. But she was somewhat encouraged by the last two weeks of July, when actually their

volume of shipments was creeping back up again. Although not to the level they'd like to see them, at least they were moving in the right direction.

Turning to the nation, the incoming data have been weaker than I anticipated in June. A month ago, I expected that most of the temporary effects of the shocks of the winter and spring, including bad weather, earthquakes, and political turmoil in the Middle East and Europe, were waning. That was clearly premature. The resurgence of the sovereign debt crisis in Europe and the debt ceiling debate in the United States have damaged confidence and increased uncertainty, even as oil prices were stabilizing and industrial activity in Japan was returning to more normal levels. To add insult to injury, we learned from the latest BEA revisions to output growth that the recession was deeper and the recovery weaker than we originally thought. Payroll employment continues to underperform relative to the previous two recoveries, but this is primarily due to the government sector, which has shed jobs in this cycle. Private-sector employment, in fact, has been on about the same pace as we saw in similar stages of the past two recoveries. Despite the below-expected output growth in recent quarters, there are signs the economy is gradually improving rather than continuing to deteriorate. For example, our research staff in Philadelphia maintains a high-frequency business conditions index called the ADS index, which is updated daily as new data become available. This short-term, high-frequency index began to slide in late 2010 and early 2011. However, beginning in June and into July, that slide has been reversed and the index is now beginning to gradually rise, suggesting that conditions are improving, not continuing to deteriorate.

The reactions of the financial market, I think, are telling and important, and they appear to arise from three basic sources. One is the failure of the European Union to deal with their sovereign debt crisis and that flared up, as we've talked about. Another is the deterioration in the

debates about U.S. fiscal policy and downgrades. And finally, perhaps more important than anything, I think, are the BEA revisions to GDP growth. I think that the market is reading in an assessment that this is telling them something about a reduction in longer-term growth, not just about cyclical patterns. And with lower potential growth, you would expect the stock market to respond a lot if they're discounting a longer stream of lower growth. I don't know that those are the right stories. They seem plausible to me. But if that is the correct interpretation of what has happened and what's going on, it's nothing to be very happy about. It's discouraging and something that is quite concerning. And yet, it's not clear at all, if that's what's going on, whether monetary policy can do much about those factors—either the fiscal policy challenges in Europe or the United States or the reductions in potential GDP growth. We do have the potential to deal with liquidity problems and crises in the financial markets to retain financial stability. And we should be prepared to adjust those as needed. It is not clear at this point whether financial markets are truly disrupted or dysfunctional, as they were in 2008, but clearly there is a lot of volatility.

Much of the recent economic commentary is focused on weaker-than-expected real activity, but we've also seen higher inflation than many anticipated. I remain concerned about recent movements in the economy's broad-based price measures. Headline inflation and core inflation measures have been on an upward trend for most of the past year. Core PCE inflation ran a bit more than 2 percent in the second quarter and appears to be on track for a similar reading in the third quarter. As the Tealbook notes, we've now had three months of upward revisions in prices for core goods and services. Thus, while we are seeing weaker economic activity, we are also seeing rising inflation. This is a quite different situation than we faced in the fall of 2010, when we resumed our asset purchases. At that time, real activity was weakening

and inflation was falling, and there were fears of deflation. The recent stabilization and even retrenchment in the prices for energy and commodities hold a prospect for some reprieve in the near-term inflation rates. I think we should be careful not to be too sanguine. We have provided a great deal of monetary accommodation to the economy, and given the stubbornness of the unemployment rate and the potential for potential GDP to revise downward, the unemployment rate has been, despite all that, very stubborn in falling. We should be cautious and vigilant that our previous policies, and perhaps easing actions we might contemplate in the near future, may translate into a steady rise in inflation over the medium term, even while the unemployment rate remains elevated. If that were to occur, we would find ourselves in a very, very uncomfortable predicament.

I think that as we contemplate any action today, we should, as Dave Wilcox indicated, take a longer-term perspective—at least longer term than what the actions of the stock market have been over the past three or four days. And we must be careful not to leave the impression that we are reacting to stock market movements. While we may not intend that to be the case, it could very easily be the result of any actions that we take when we act in the midst of such great volatility. I would remind everyone of the story that they all know—the famous quote by Paul Samuelson that the stock market has predicted nine of the past five recessions—and we should not overreact to the admittedly very tumultuous times in the stock market. I'll save my other recommendations for the policy go-round. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. The Eighth District economy continues to grow at a moderate pace. The general tone from business contacts is that business is broadly satisfactory, but there is also substantial anxiety concerning macroeconomic developments. A

few business contacts reported hard data confirming a slower economy during the May/June/July period, but not consistently, and the overall tone was actually mixed. The Eighth District unemployment rate, for 16 District metropolitan statistical areas, increased during the spring from 8.5 percent to 8.9 percent. Residential real estate markets continue to look very weak. Market participants were hopeful for 2011, but better results have not materialized. Reports from around the District seem to confirm that automobile production will return to full strength sooner than previously anticipated.

The national economy is in the middle of what may become a severe dislocation. My view is that four uncertainties have held back growth during the first half of 2011. First, Japan. But reports now seem to indicate a faster-than-expected return to full production. This seems bullish for the second half of the year. Second, energy and commodity prices. This was possibly the largest concern in the first half of the year, but oil prices in particular have retreated substantially from their highs earlier this year, so I think this is another bullish factor for the second half of the year. Third, the U.S. fiscal situation. This is not a new issue. From a macroeconomic perspective, there is very little news here and really no surprises in the way the debt deal was finally put together. However, the long debate focused attention on the political intractability of the situation. Still, so far, Treasury yields have remained extremely low. There may be a crisis of confidence in U.S. governance, but it is not showing up in yields to date. The real problem, in my view, is the fourth uncertainty, which is Europe. The key news during the intermeeting period has been the blowout in Italian and Spanish debt yields. This seems to indicate exactly the type of contagion that could turn the sovereign debt crisis into a global macroeconomic shock. The most recent euro zone agreement is proving insufficient for the European policymakers to stay ahead of the curve. I conclude that the risks from Europe remain

substantial and are a key driver of the global selloff in equities. If this is the main disturbance, I do not think we have a natural policy response. I would expect U.S. Treasury yields to remain low on flight-to-safety grounds, which is exactly what seems to be happening.

One additional factor, which has been mentioned many times already this morning, is the second-quarter GDP report, which showed very sluggish first-half growth and substantial downward revisions to earlier data. In my opinion, this is causing many to rethink U.S. potential growth going forward. Lower potential growth may reasonably imply a lower value for U.S. equity markets, which seems to be happening. It also makes the U.S. fiscal situation so much worse. However, as President Plosser was just emphasizing, lower potential growth is not a problem that monetary policy can fix. I will have one side remark on the GDP report. Anecdotal reports from around this table from the first half of 2011 did not seem to indicate an economy at stall speed. I would not be surprised if further revisions again changed the picture of the first half of 2011.

Current monetary policy remains extremely accommodative and has ratcheted up inflation expectations over the past year. With the policy rate at zero, higher inflation expectations translate into lower real interest rates, the very definition of easier monetary policy. The real five-year rate, calculated from the TIPS market, is negative 67 basis points as of Friday—that's a five-year rate—substantially lower, by approximately 100 basis points, than last summer. So this Committee has done a lot, and I think further balance sheet policy is the most potent tool that we have. It also carries with it substantial inflation risk, as has been repeatedly emphasized around the table.

Our goal today, in my view, is to effectively acknowledge the slower economy and the difficult situation in financial markets and to remain prepared for action in the event that the



anticipated strengthening in the second half does not materialize. I counsel against taking direct policy actions today for two reasons. Any action today with respect to further asset purchases, number one, would be viewed as helping the Congress with fiscal problems that weren't solved and, number two, would solidify the notion that there is a so-called Greenspan–Bernanke put in the equity markets. Still, despite not taking action today, it's completely reasonable to plan for further action if necessary, given the very volatile markets of the past few days. Any policy action we take going forward should be appropriately tied to specific outcomes in the macroeconomy and not to the calendar. We have been burned twice by tying the end dates of key policy moves to the calendar, only to have the data contradict our decisions. This occurred in March 2010; we had to reconsider our policy in August 2010. It now happened again in June 2011, and we are back here contemplating further action today. We should adopt an approach closer to our interest rate policy, in which we make adjustments meeting by meeting in response to incoming data.

Other policy approaches, besides balance sheet policy, do not sound like they will be effective to me. The new Twist policy, in my view, would have questionable effects that would complicate our exit strategy. Also, rates are puzzlingly low already out on the yield curve, so I'm not sure how much impact it would have there. Also, the effects of that are not on expected inflation, which I think is the key variable from our perspective. I think that an explicit promise into 2013 has many problems. It's not state contingent, which I have just emphasized. I don't think it's credible to make promises that far out into the future, and I think there's a substantial probability that a promise like that could backfire. As I've emphasized before here, instead of generating higher inflation expectations by promising to keep rates at zero, we may get deflation. Markets might take the promise of low rates as a signal that potential growth is actually very

low. They'd come to expect zero policy rates for a very long time, which is only consistent with a mild deflation in the long run. In addition, following that kind of path, as inflation expectations fall, policy actually gets tighter, not easier. So I think there are a lot of problems with the explicit promise into 2013. On targeting rates, we can talk about that more during the policy round, but I think the main issue there is the possibility that we would lose control of the balance sheet if we tried to target rates. Those are my comments for now, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. Over the past six months, there's been a decline in optimism among our business contacts in the Ninth District, at least among those who are not in resource-related businesses and who do not live in the Dakotas. [Laughter] More specifically, I am now hearing a renewal of the 2010 wait-and-see attitudes on both cap-ex and hiring. The fading optimism in the Ninth District is reflective of national economic conditions. As we are all aware, the economy grew slowly in the first half of 2011.

I think we can look to housing as being a potential source of this slow growth. In my view, the roots of this recession and of the slow recovery lie in the loss of housing value and the concomitant shrinkage of wealth and borrowing capacity. And this process continues. For example, the flow of funds data tell us that the value of real estate owned by households fell another 7 percent from the second quarter of 2010 through the first quarter of 2011. We often focus on the impact of this loss of net worth on demand. However, it also affects the supply side of the economy. As Governor Duke emphasized in a speech last spring, entrepreneurs rely heavily on their personal assets and savings to initiate new businesses. Hence, declines in household net worth disrupt the process of business formation and so disrupt the process of innovation and job creation that fuels the expansion of potential output. And here, I think, the

Census Bureau's data on job creation from 2006 and 2007 are suggestive. Housing values began to fall in 2006, and financial conditions generally worsened in 2007. But growth remained positive until the first quarter of 2008. If you looked at overall job creation, it remained higher in 2007 than in 2006. But the number of jobs created by newborn firms fell from 2006 to 2007 by 12 percent, and of course, it's gone on to fall sharply further since then.

I've stressed one channel that links financial frictions and the supply side of the economy. There are other channels that one could point to. What was initially a demand shock can actually turn into a supply shock. And I offer some evidence that actually countervails the thesis that President Lacker was describing. There's a host of empirical papers that document how spells of non-employment are associated with significant wage losses. And the question is, is this due to screening or signaling effects, or is it due to actual deterioration of skills? There's a paper by Edin and Gustavsson from 2008 that uses a Swedish longitudinal data set that links measures of general literacy and numeracy to measures of employment, and they estimate that a year of non-employment is associated with an individual moving down 5 percentile points in the distribution of these general skills in the population. This kind of erosion of skills is another effect of the fall of net worth generating unemployment and then translating into a corrosive effect on the supply side of the economy.

What's my point? My point is, these joint effects on demand and supply make it hard for us to establish with any certainty to what extent the low growth of the economy translates into disinflationary pressures, whether the surprising low growth in real GDP reflects slow growth in potential output or a worsening output gap. And the revisions in the Tealbook arising from the recent revisions in the NIPA are consistent with this abstract statement. Thus, the August Tealbook says that the potential GDP grew at only 1.1 percent in 2009 and only 1.7 percent in

2010, while in April the Tealbook said the potential GDP grew at 2 percent per year in both years. These uncertainties about potential output imply that we need to use additional sources of information as we seek to measure changes in resource slack in the economy. For example, despite the recent modest employment reports, the Tealbook predicts that unemployment will fall 0.4 percentage point over the course of 2011, and we generally would view this kind of decline in unemployment as a sign of diminishing resource slack. Now, I talked about it at earlier meetings—at length, I would say. Unemployment itself is only an imperfect signal about the amount of slack in the economy. I think it's useful to turn to inflation itself as a complementary source of information.

And here I think Governor Tarullo is absolutely right, and I'll put myself in the group that was surprised on the downside by events in the first half of the year in terms of economic growth. I think I'll be surprised on the downside relative to my January forecast by what happens in the second half of the year. But it's also true that most of our forecasts were low for PCE core inflation for 2011. I was probably on the high side relative to most of the people around the table, and I was forecasting 1½ percent PCE core inflation for 2011. Now I agree with the Tealbook that we're likely to come in at something closer to 1.8, and possibly even higher, for the entire year. This is something we have to take into account as we think about the degree of slack and the effectiveness of monetary policy in the economy. So from 2009 to 2010, core inflation was falling from 1.7 percent to 1 percent. From 2010 to 2011, as I just talked about, it's going to be rising from 1 percent to something like 1.8 percent. At a minimum, you would normally think about this increase in the rate of change of inflation—this is the third derivative of the price level, for those of you who are keeping track of these kinds of things. President Williams appreciates that. [Laughter] It would seem to indicate that resource slack is

lower in 2011 than in 2010. GDP growth in 2011 has been slow, but as the Tealbook emphasizes on its very first page, we don't exactly know why it's been slow. The falling rate of unemployment and the rising rate of inflation suggest that, despite the slow growth, resource slack is diminishing. In the next go-round, I will talk about how these considerations should impact our thinking about policy. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. A couple of things. In our region, things are about as they were—modest economic growth. We still have an energy boom. Whether that stays, given recent events, we can all guess at. It depends on whether it's temporary or longer term. Agriculture's still doing well. We're still seeing very significant increases in the value of properties as people deploy their liquidity into any kind of a hedge they think they can find. One thing we have found, in talking with some of the major railroads in our part of the world, is that traffic is up in the past month—pretty importantly up, using their words. So we have this modest economic growth. It's at risk given all the world events that we see today, and who knows for sure?

I realize, in terms of the comments that I'm making, that we're all well intentioned, and I take the original comment that we have to be open minded about this, but we are products of experience. As you mentioned, I've been through three recessions here, but it is actually more than that, since I was in the Fed before that. The question I ask myself as we go through this stuff is, what's wrong? Is it that capital's not available, that there's no liquidity in the system, that we're not able to deploy it because of the impediments that monetary policy might have contributed to? Is the policy rate too high? Is there a liquidity shortfall somehow? Or, perhaps, are there other issues? The consumer in America is highly leveraged and remains so. The states

are highly leveraged with their future promises, and they have to deal with that. Do we have a U.S., but also a global, sovereign debt issue that people are thinking about—whether it's real or not, they feel it's real? Is this affecting confidence, and is it inhibiting the deployment of capital around the world and especially in the United States? And can we, as a policy body, increase confidence by actions we take? Perhaps. But I think we're finding out that we tend to do it on a temporary basis as we revert to the real issues that are ours, our country's, and others' to deal with, and that is the highly, highly leveraged world economy today that needs to be worked through. Our political systems—not just here, but also in Europe—are having difficulty coming to grips with that because it requires significant adjustments in how we use our resources. And that's really what we're facing today.

I suspect that we are going to struggle through this for some time to come, and I worry that what actions we take now, with our good intentions, will have longer-term consequences as they are deployed. And I'm not just talking inflation. I mean consequences for the allocation of resources—I think the misallocation of resources is a risk as much as anything. President Evans, I understand what you're saying in terms of, "Would we be reacting this way if inflation were 5 percent?" But I will tell you, history and experience tell me, that over time, we—because we do care so much—tend to favor trying to bring the unemployment down over our inflationary goals. We did it in the '70s. Inflation systematically got up because we were constantly pushing to try to keep unemployment lower, until finally inflation was so high that we had to take a pill, a very bitter pill. Yes, I think we could easily find ourselves, if unemployment were to stay high or come down more slowly than any of us want, biasing our outcomes toward 5 percent inflation—not today, maybe five or six or seven years from now. But I remind people that in economics that's not a long time, actually. And this housing crisis started in the 2002–2003

period and didn't erupt until 2007–2008. So my only point is to say that I agree. I wish we could do more. Don't misunderstand me—I wish we could do more. But I think flooding more liquidity into the market, while it may have a temporary impact, has intermediate-term consequences—not just longer-term consequences—that I think force us to be more careful right now. And I think we would be wise if we are more careful. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Pinalto.

MS. PIANALTO. Thank you, Mr. Chairman. The economic news since our last meeting has been very discouraging, and it's getting harder to argue that the weakness that we saw in the first half of the year was an aberration. After the GDP revisions, the recovery now looks like a tough slog with occasional bright spots that have been increasingly rare. So, like many of you, I revised down my forecast for GDP growth over the next year and a half. While a variety of inflation measures have been surprising to the upside, I think the sources of those pressures will prove to be temporary.

I'll briefly elaborate on my assessment of the outlook. For some time now, I've projected a pace of recovery that's been on the lower end of the Committee's range of forecasts, but the incoming data have been even weaker than I have anticipated. While some estimates of recession probabilities have moved into the danger zone, I don't think a decline in GDP is the most likely scenario. Instead, I expect output growth to pick up, albeit to a still-disappointing rate, in the second half of the year. In my judgment, the key source of restraint on the pace of GDP growth is consumption. Household spending is likely to remain soft while income growth is limited and households continue to repair their balance sheets. The recent revisions to the NIPAs have highlighted these forces by significantly marking down income and consumer spending over the past three years. My business contacts have long stated that retail sales have

been unusually bifurcated, with lower-income consumers still struggling and behaving as if the recession hasn't ended. Still, my business contacts are reporting some growth, although most are reporting only small gains. That said, on a more positive note, households are making grudging progress on debt reduction, and in my view, this progress will support modest growth in the economy and not lead to further deterioration.

Key auto plants in my District are swiftly returning to normal production levels, which are about 50 percent higher than production levels were as recently as June. This pickup in production is occurring despite some risks of a slowdown in overall retail sales, because dealer inventories have been left exceptionally low by the disruption in production stemming from the earthquake in Japan. As the Tealbook suggests, the planned acceleration of auto production should provide a pretty sizable increment to output growth. The last dramatic recovery of auto production was in 2010, and it was an important factor in one of those rare bright spots in the recovery. Nevertheless, like the Tealbook, I'm concerned by the risk that this bump-up in manufacturing activity is going to prove to be transitory.

Turning to the inflation outlook, I had been expecting to see measures of both total and underlying inflation moderate in the second half of this year. And overall inflation has moderated, but inflation excluding food and energy has not. I still consider underlying measures of inflation to be useful predictors of future headline rates, and the Cleveland Fed's median and sticky price measures both indicate a lower underlying rate of inflation than does the measure excluding food and energy. In addition, my downward revisions to the pace of economic growth induce me to expect reduced price pressures as the months roll by. It also appears that financial markets are less concerned about inflation amid the signs of a global slowdown. Inflation expectations, as measured in the Cleveland model, fell significantly across most durations



following the debt agreement and the S&P rating announcement. For example, the three-year expectation two years forward, which I think is perhaps the most relevant policy horizon, has declined 23 basis points to just under 1½ percent since the July CPI release. It looks like inflation expectations could again be shifting, and if inflation expectations dip much further, inflation itself may move away from our price stability mandate.

Turning to the risks surrounding my outlook, with the momentum to economic growth already so weak, I would put the risk to output as largely to the downside. In recent meetings, I have viewed the inflation risks as skewed to the upside, in light of both inflation rates and expectations coming in higher than anticipated. But today, the shift to lower inflation expectations that I've observed in the data has caused me to return the risk to inflation to being balanced. These recent changes in risks have added to the challenges for monetary policy, and I think they suggest carefully exploring a range of policy options. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Williams.

MR. WILLIAMS. Thank you, Mr. Chairman. The deterioration in the economic outlook has been dramatic and equally disturbing. Early this year, the economy downshifted to a rate of expansion that fell well short of the growth rate of potential output, which we'd traditionally call a growth recession. Some of this weakness reflected transitory factors, and economic growth should pick up modestly in the second half of the year. But even with that improvement, the pace of recovery will be insufficient to make meaningful progress on unemployment until next year. Moreover, I see significant downside risks to the forecast. Anemic growth and high unemployment leave the economy especially vulnerable to further adverse shocks and a double dip. The debt crisis in Europe provides one example of such a shock. Concerns regarding the recovery's vulnerability have been a major reason for the recent volatility in financial markets,

and I'm especially worried about the fragile confidence of households and businesses, which likely took another big hit with the stock market downturn. Perhaps more worrisome is that the self-correcting process, key to past recoveries, appears to be largely AWOL this time around. Despite our efforts to account for the effects of fallout from the financial crisis, we have consistently been too optimistic about the pace of improvement in the economy. I have become increasingly concerned that we may not have managed to avoid a Reinhart–Rogoff pattern of weak and prolonged recoveries that have followed past financial crises. Perhaps this time is not so different after all.

The extent to which persistent headwinds are hindering the recovery can be quantified in terms of the medium-term equilibrium real interest rate. In my comments, I will refer to a particular model that I developed with Thomas Laubach some years ago. In this model, the equilibrium real interest rate equates supply and demand over the medium term of several years. It changes in response to highly persistent shifts in aggregate supply and demand. A decline in the equilibrium real interest rate would imply a negative shock to demand relative to supply. I think this measure gets at the issue of supply versus demand shocks or persistent ones. Since the outset of the recession, the estimated medium-term equilibrium real funds rate has fallen from 2.4 percent to nearly zero today. And for comparison, before the current episode, the lowest reading that we had on our estimate was 1.8 percent during the headwinds period of the early 1990s. Other measures of the equilibrium real interest rate that we look at, as well as those that are reported in the Tealbook, Book B, have also declined considerably over the past few years.

I am also increasingly concerned that the sluggish pace of growth may permanently scar the economy. The magnitude and duration of this downturn will mean that the millions of long-term unemployed are seeing their human capital deteriorate or actually be destroyed, along the

lines of the comments of President Kocherlakota. I found the alternative scenario “More-Persistent Spending Weakness with Supply-Side Corrosion” to be a very real risk, although not quite yet my modal forecast.

Turning to inflation, with oil and some other commodity prices having declined sharply from earlier peaks, headline inflation is moderating. Core inflation also rose noticeably this year, albeit from a very uncomfortably low level. Some of the rise in core inflation reflects temporary factors that, as mentioned in the Tealbook, should fade in coming quarters. For example, our staff has looked at the issue of pass-through of import prices, and we find that pass-through of higher import prices likely contributed about 0.3 percentage point at an annual rate to core inflation in the first half of the year. With non-oil import price inflation moderating, the impulse to higher core inflation should also diminish in coming quarters. Indeed, my business contacts tell me that the pass-through of higher import prices to consumer prices either has already occurred or will be completed soon.

In sum, I expect the recovery to continue, but at a frustratingly slow pace that leaves the unemployment rate elevated for many years. I expect inflation in coming quarters to return to levels of around 1½ percent, below my preferred long-run goal of 2 percent. Unfortunately, I don't see light at the end of the tunnel. The staff's long-term projection sees us falling short on both of our mandates through the end of 2015, the final year reported in the table. Apparently the long run is just not long enough to reach our goals, at least without additional monetary support. But that's a topic I'll leave for my comments later. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN DUDLEY. Thank you. First, I'm going to talk about financial market developments, and then I'll talk a little bit about the economic activity data we've seen.

My view is very similar to Brian's that the market reaction is really about the deterioration of the economic growth outlook. If you look at the confluence of the market indicators—stocks down, credit spreads wider, flight into safe-haven currencies, drop in Treasury yields—all are consistent with anxiety about the growth outlook. What's dangerous about this, of course, is that there's a risk that this becomes a self-fulfilling process—that markets weaken, which then causes people to revise down their economic growth forecast, which leads to further market weakness. Letting this run unabated is not without considerable risk, and I think the risks are higher than normal because, one, the economy was very close to stall speed even before this, and, two, the market understands that there's a lack of potent policy tools that can be used to arrest this.

I think that the market developments that are most disturbing to me right now are what we saw yesterday with bank stocks falling very, very sharply and CDS spreads widening. What was interesting was that the stocks that fell the most were those for the weaker institutions. I guess that's not really surprising because obviously they'd be hit most by a poor economic environment. But we did hear something that was actually very interesting. It was that the inability of some banks to buy back their shares may have been contributing to greater price weakness in their stocks. This could be because people who were putting on short positions knew that these companies would not be able to resist as easily as other companies. I think that the key issue in terms of this dynamic is that it's not obvious what the banks can do to break it. It's not as if the bank could say, "I'll go out and raise more capital," and that's going to make everybody feel better, because that's going to be taken as a signal that the bank may actually be weaker than what people thought. The key questions on this note are likely, one, will this dynamic continue, and, two, will it lead to funding pressures? And where I guess I would be

particularly nervous is among the broker-dealers. So far we haven't really seen much evidence of this, but that would be a very, very dangerous channel. And, three, will this lead to credit rating downgrades? In other words, if this process goes on long enough, will the credit rating agencies feel some need to respond to the deterioration in the stock prices and the widening credit default swap spreads by cutting the credit ratings, which then could feed back through in terms of the funding, which would be pretty dangerous? Now, S&P said yesterday that the government downgrade would not lead them to mechanically downgrade the ratings of the major financial institutions, but that's now, and things could change as we go forward.

In terms of Europe, I think that it is disturbing, first, that we're seeing renewed bank funding pressures. Money market mutual funds are shortening their tenors, and they're shortening them now to financial institutions that were really pretty protected and not being swept up by this a few months ago, especially some of the major French institutions. We're seeing it in markets more broadly in terms of widening in the FX dollar swap basis and a bit of upward pressure in dollar LIBOR rates. It's hard to know if this is it or if we're going to see a lot more of that, but it is certainly disturbing. The second issue in Europe is that there really is no long-term plan. The ECB's intervention—the fact that they're willing to buy Italian and Spanish bonds—buys you some time. But in some ways, the ECB intervention is very inconsistent with the commitments that have been made in terms of the EFSF because there has been no commitment made to increase the size of the EFSF beyond €440 billion. If you really bring Italy and Spain into the picture, the EFSF needs to be orders of magnitude larger than that, and so far at least, the German officials have said that they have no intention to expand the size of the EFSF. Until that changes, I guess I'm going to be pretty nervous about how this is all going to play out.

In terms of the economic news, as President Rosengren mentioned, we decided to circulate a memo just talking about the conditional probability of recession given how weak output growth has been. I'm not sure I would take those probabilities literally. Obviously every business cycle is different, but it does, I think, show you that we are at a very dangerous point in terms of how slow the economy is growing and what that typically foreshadows regarding future outcomes in terms of recession. The second thing I just want to say is that I wouldn't take much comfort at all from the payroll employment data. As David said, it wasn't quite as horrible as it could have been, but it was pretty bad. Aggregate hours worked were up only 0.1 percent; that's not very strong. And I would emphasize that this is not very timely information; this is the survey for the week that includes July 12. To the extent that there was a deterioration in confidence and business activity in the run-up to the debt limit fiasco, we haven't seen that yet in the employment data. It's very possible that the next employment report could actually be quite a bit weaker than that one. And the last thing I would say in terms of the employment report is that the household survey was much weaker, with, as David mentioned, the drop in the unemployment rate due solely to the decline in the labor force participation.

From my perspective, the weakness of the economy was very well established even before the market retrenchment. On top of that, we have the risk that these market dynamics will continue, and that suggests to me that we should do more on the monetary policy front. Now, I agree with President Hoenig that the problem is one of deleveraging at the household sector and at the government sector, and monetary policy cannot solve the deleveraging problem. That's something that has to take place. But I would argue that the rate at which this deleveraging process takes place does matter, and monetary policy can affect the rate of deleveraging. And by affecting the rate of deleveraging, it can determine how many things actually break in the

financial system, and I think that can be important. So I still think there's a role for monetary policy, even though I agree with you that this is really mostly about deleveraging. Thanks.

CHAIRMAN BERNANKE. Thanks. Governor Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I've marked down my economic growth outlook substantially in light of the information received over recent weeks, and I've become increasingly concerned about the downside risks. The latest data indicate that the U.S. economy has been running alarmingly close to stall speed over recent months, and I anticipate only a modest pickup in growth over coming quarters. Indeed, as David Wilcox mentioned, the staff's econometric analysis suggests a 1 in 4 probability that the economy has already slipped into recession. In other words, given the recent evolution of GDP, gross domestic income, and the unemployment rate, the NBER might well conclude that another recession began sometime last quarter. One particularly troubling sign of economic weakness is that real personal consumption expenditures have declined in each of the past three monthly readings. It's worth noting that a pattern of three consecutive monthly declines in real PCE has occurred only on a handful of occasions over the postwar period—namely, 1959, 1974, 1980–81, 1990–91, and, most recently, in late 2008 and early 2009. In every single one of these previous occasions, the three-month sequence of real PCE declines was associated with an NBER-dated recession.

Of course, there are some special and temporary factors depressing consumer spending. Supply chain disruptions had a dramatic impact on the auto sector last quarter. So it seems reasonable to anticipate a significant pickup in motor vehicle production and sales over the course of this summer, providing a transitory stimulus to consumer spending and GDP growth. Nonetheless, we should keep in mind that those supply-side factors cannot fully account for the recent weakness in household spending. The nondurables and services components of real PCE

were both completely flat, on net, over the past three months. Energy price increases also depressed spending in the first half of the year, but careful staff analysis suggests that the decline in real disposable income resulting from higher energy prices can explain only a portion of the negative consumption surprise.

Consumers are more downbeat than can be explained by trends in income, wealth, inflation, and unemployment. To gain greater insight into the American consumer's psyche, over the past few weeks I've been quizzing various friends, relatives, taxi drivers, and even innocent bystanders in the supermarket checkout line concerning their perspectives on the economy. I could report some interesting anecdotes, but I'm reluctant to draw definitive conclusions from these interactions with a fairly small and arguably nonrandom sample of contacts in Georgetown, Berkeley, and Lanai. [Laughter] To gain a more accurate read on the wider population of American households, I devoted a few hours last weekend to analyzing the plethora of consumer sentiment surveys, including several conducted on a daily basis that are now readily available on the Internet. Most of the survey results are free, but to support aggregate demand and in the interest of monetary policy, I shelled out \$19.99 for a premium subscription to one of them. In evaluating surveys of consumer sentiment, it's important to keep in mind that there are marked differences in methodology that might be innocuous during normal times but have crucial implications under present circumstances. For example, the Conference Board survey has served as a long-standing benchmark on consumer sentiment. I was surprised to discover that this survey is still conducted via the U.S. mail, just as it was a few decades ago. Thus, it's easy to see how the Conference Board's measure will be heavily weighted toward the sorts of consumers who don't move very often and promptly notify the U.S. Postal Service whenever they do so. By comparison, the Michigan survey contacts households by a phone-



based approach, developed about two decades ago, in which telephone numbers are randomly selected from the phone book. One pitfall is that this approach may systematically underweight consumers who have a cell phone but no landline. There are, however, polling organizations like Gallup and Rasmussen that conduct daily surveys using state-of-the-art methods and that use a whole raft of demographic data to help ensure that the results are representative of the population.

The Conference Board survey indicates only a modest drop in consumer sentiment over recent months, but I no longer find that result very reassuring. In contrast, the Michigan survey and the Gallup and Rasmussen polls all indicate that consumer sentiment started moving down during the spring and then plummeted last month to levels not seen since March 2009. According to the Gallup poll, about three-fourths of households view national economic conditions as getting worse, while the Michigan survey indicates that only 10 percent of households are expecting any increase in their own real income over the next year or two. Moreover, the latest daily readings of the Gallup and Rasmussen polls suggest that consumer sentiment has continued drifting downward over the past week in spite of the debt ceiling resolution and bits of good news from the latest employment report. Yesterday the Rasmussen index showed that sentiment among the roughly half of Americans with at least \$5,000 invested in stocks, bonds, or mutual funds fell to lows not reached since March 2009. I would also mention that this morning, an NFIB small business survey was released for July; it shows a further fall to recessionary readings in business confidence this spring and indicates that this result is almost entirely driven by respondents' concerns about their likely sales.

Returning now to econometric evidence, staff analysis of Markov regime-switching models suggests that an elevated level of consumer pessimism is by no means unwarranted. For

example, the recession probabilities that David Wilcox presented in his briefing were derived from a Markov regime-switching model in which the economy periodically transitions between three possible states: an expansion state, with normal GDP growth; a recession state, with negative GDP growth; and a stall-speed state, in which GDP growth is positive but well below normal. The estimated parameters indicate that the stall-speed state is a harbinger of bad news because that state is almost invariably followed by a recession. Unfortunately, this model currently implies that the probability is greater than 60 percent that the economy is either at stall speed or in recession. Of course, this model-based approach could be overestimating the magnitude of downside risk to the economy. The model doesn't account for the extent to which economic growth during the first half of this year was damped by the supply chain disruptions and other transitory factors. However, the model is blissfully unaware of other significant risks, such as the S&P rating downgrade, the weakness of the housing sector, and the serious challenges facing our European counterparts.

In summary, incoming information since our last meeting points to a modal outlook of sluggish economic recovery over coming quarters, and I see very substantial downside risks attending this outlook. In my view, these circumstances clearly call for additional monetary policy accommodation, a point to which I will return in the policy go-round.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. I celebrated my third anniversary with the FOMC with markets once again fluctuating wildly. [Laughter] So I really had to fight growing posttraumatic stress disorder stemming from my early experiences here. However, at the risk of seeming too Pollyanna-ish, there are a few factors that seem better today than they were in 2008 or even last August. The banking system is in much better shape, and indeed, our policies are

focused on incenting them to take more risk rather than to de-risk. Corporate balance sheets and earnings are strong, and banks report that incoming financial statements show notable strengthening in businesses of all sizes. Consumer balance sheets are also in better shape due to voluntary and involuntary deleveraging, and the weight of debt has been reduced through refinancing at lower rates. But their income picture is grim, and the value of their primary asset, their home, is still drifting downward. And finally, while uncertainty is still shading every financial decision, a few things have become clearer or will become clear in the near term. The debt ceiling has been increased. We no longer have to wonder whether and how far S&P is likely to downgrade U.S. debt, and we will soon know what that downgrade means for markets.

Turning to the banks, the same themes that I've been reporting continue. Credit metrics continue to improve. In particular, credit card metrics are approaching, and in some instances have moved through, expectations for norms going forward. Loan demand is still quite weak, but the banks are seeing slow, steady improvement from very low levels. Interest in mortgage refinance picked up recently as rates tipped lower. Credit card response rates are a bit better, and the Treasury has begun announcing approvals for investment under the small business lending program. However, many of the banks that applied are under enforcement orders requiring permission to pay dividends and are therefore not eligible, and it looks now like approval rates will be disappointing. Further, I did talk to at least one bank that had been approved, but they're now concerned that they won't be able to find the loan growth that they had anticipated. So they're not sure they're going to accept the funds. Deposits are still growing, but with no place to invest the money, price is ratcheting down.

The most discouraging part of my recent discussions is that while banks no longer seem to be fighting for survival, very few have a clear vision of how they can achieve long-term

growth or robust profitability. Bank earnings are somewhat like the economy—modestly positive, which is better than negative, but still vulnerable to shocks. Problem assets are being worked out, but there's no replacement demand to offset liquidating portfolios. Interest margins are weak and falling as funds from liquidating loans and new deposits are invested at very low rates, and banks have less room to lower deposit rates as they find themselves facing the zero lower bound. Noninterest income has taken hits from regulations on overdrafts and interchange fees, and increases in other fees will only partly mitigate these costs. Compliance costs from Dodd–Frank are expected to be substantial, and elevated deposit insurance premiums seem likely to continue for the foreseeable future. This was the first quarter since 2005 in which upgrades in supervisory ratings outpaced downgrades, but I would characterize this statistic as pointing to less weakness rather than more strength. One other note of caution: I believe there are a lot of banks carefully watching the BNY Mellon decision to charge for new deposits. With weak profitability, nowhere to invest new deposits, and rising FDIC and regulatory costs, the temptation to charge at least for deposit insurance is high. As asset rates get closer to zero, negative nominal interest rates on deposits could quickly become a reality. While monetary economists might cheer this outcome, I'm not sure what kind of market or banking distortions would ultimately follow.

Finally, as we think about what actions we might take to support growth, I think it's important to look at how improvements in the various loan segments are evolving. Knowing that many are loath to allocate credit, I would still argue that our tools are more limited now and that we should consider targeting our actions to the weakest credit segments to yield better results. Looking at the results of the Senior Loan Officer Opinion Survey, I find the responses to questions about the level of tightness to be quite instructive. Business credit seems pretty fully

healed, with large fractions of respondents reporting credit standards about in the middle compared with levels that existed between 2005 and today. Even with commercial real estate, nearly half report standards in the middle or easier. With a combination of declining past-due rates, lower corporate leverage, building cash positions, and improving earnings, the corporate sector does not appear to be credit constrained or likely to respond to lower rates by borrowing or investing more. In contrast, the charts for consumer credit are a sea of red, the color indicating tighter conditions. Only auto lending shows some level of neutral and easier lending, and to be fair, the slightly tighter conditions in credit cards may be more of a reaction to the CARD Act than anything else. Moreover, the improvement in delinquencies and a resumption of growth in non-real-estate-secured consumer credit provide some evidence that creditworthy customers are able to access credit, and those who do still have credit outstanding are not experiencing as much difficulty paying it. But standards for first mortgages and home equity loans are extremely tight. Outstandings are steadily declining, and delinquency rates remain stubbornly high, reflecting both high levels of stress among borrowers and a backlog of delinquency resolution. So I believe we need to look at problems in the mortgage market as the area where policy is most likely to result in improvements in the economy. We have a housing task force at work here at the Board, and we are reaching out to other parts of the government to try to advance some policies that we think might help. But if, as seems likely, this Committee considers further monetary policy actions, for me one yardstick for judging potential effectiveness will be an estimation of the extent to which the action will affect refinancing or new mortgage lending. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Raskin.

MS. RASKIN. Thank you, Mr. Chairman. To me, the economy appears to be faltering, and the probability that this faltering exposes us to increased sensitivity and vulnerability has risen materially. Labor market conditions are certainly weaker than in June. Although the unemployment rate ticked down last month, I don't see any good news in the labor market situation. For one thing, I think discouraged workers are holding down the unemployment rate. Indeed, the household survey indicates that the share of the working-age population that is now employed stands at 58.1 percent, the lowest level since 1983. In addition, more-forward-looking indicators of labor demand, like the number of temporary employees or the claims figures, are not at all encouraging. According to the Labor Department, there are 4.6 unemployed workers for every job opening, and these job figures were added in the middle of July before the debt ceiling debate and before stocks began their steep descent. The economy may not be falling back into recession, but neither does it appear to be growing at the 3 percent rate many had hoped to see in the second half of the year.

One of the theories suggested in the Tealbook to explain the notable weakness is that the self-equilibrating tendency of the economy has been greatly weakened by the damage resulting from the financial crisis. This theory is only partially plausible to me, and here is my evaluation of it. Consumer and business confidence are not recovering the way they usually do following a downturn, and this lack of confidence could be, as it seems to be already, snowballing into a self-reinforcing cycle of anxiety. Businesses are hunkering down, weakening the job market further, and consumers, in turn, are launching their own programs of austerity, curbing the spending the economy needs to grow. If you think through the usual determinants of consumption—disposable income, employment, stockholder wealth effects, housing wealth effects, and

confidence—they all are currently a drag on consumer spending growth, and it's not obvious to me how they are going to get turned around.

Most disturbingly, the interactions among these factors seem to be dragging down economic growth even more. For example, I have a neighbor with an elite MBA but a job that doesn't need one, and she is so embarrassed about the real possibility of losing her home that she used to call me repeatedly when I was the banking commissioner, pleading for secrecy but needing a sustainable modification. On this past Saturday morning, when I went to retrieve my newspaper in the yard, she drove by in her car and stopped to chat. I asked her how she was doing, and she said something like, "Thank goodness I squandered my savings fighting foreclosure so I don't have investments to tank after the debt deal that won't get us anything." [Laughter] That formulation kind of took my breath away, so we talked about the weather. But her remark makes me wonder about the self-correcting part of the staff's possible hypothesis. If the components of consumption are weak and households don't expect much improvement, what moves the economy back to its trend level of growth? It may well be that the overhang of private debt needs to be reduced before we get a sustainable recovery. After all, taking a long look back, personal debt had become a cornerstone of economic and capital market activity. While initially consumer debt existed at the fringes of the economy, the prevalence of installment loans, national mortgage markets, and credit cards permitted consumers to borrow against money they did not have. As the future of middle-class incomes becomes much less stable, the logic of borrowing against such hypothetical future incomes begins to unravel. In the run-up to the crisis, credit was closing the gap between the haves and the have-nots, but without rising real wages and with a burst credit bubble, vast amounts of debt remain. If debt deleveraging takes about seven years, we're smack in the middle of slower growth, with more to

come, and the question becomes less about what the outlook for the economy is and more about how monetary policy can help with the pace of this debt deleveraging.

There are two dynamics that I think will hold back growth for a while. First, households and businesses don't have confidence in the future and so they're not willing to spend money and take risks right now. Second, households need to deleverage and aren't willing to borrow in order to spend ahead of their incomes. If I'm right about these, the economy isn't going to recover quickly on its own and is going to need considerable policy support. Thank you.

CHAIRMAN BERNANKE. Thank you very much. Thank you, all. Let me try a summary and then make a few comments.

Participants were concerned about an apparent ebbing of economic growth momentum, notwithstanding the possibility that the reversal of temporary factors such as the supply chain disruptions and high energy prices could bump up activity in the near term. Significant downward revisions to GDP data for both the first half and earlier years contributed to the weaker outlook, as have financial disruptions. Many saw the risk to the recovery as now to the downside, and some worry that the economy might be near stall speed. As one measure, the estimated real equilibrium federal funds rate has fallen sharply. Others noted, however, that slower potential growth may account for some of the weaker performance. Leverage and debt also are retarding growth over a longer period. As to inflation, lower commodity prices will reduce headline inflation, and overall, people see approximately balanced risks to the forecast with respect to inflation. Uncertainty about the forecast may be, really and truly in this case, higher than usual.

Consumer spending has been slow or even declining, especially for low- and moderate-income households, as households have continued to repair their balance sheets and as sentiment



has been poor. The declines in automobile purchases associated with the Japan disaster account for some but not all of this weakness, which has been widespread across sectors. Conditions in the labor market remain weak, as unemployment has increased, participation rates have fallen, and the employment-to-population ratio is very low. Some of these phenomena can be explained by heterogeneity among workers, including both skill loss ex post and ex ante differences, but long-term unemployment can leave permanent scars on the labor force. Housing and nonresidential construction remain weak, even though the rental housing sector is stronger. The weakness of the housing sector has broader macro consequences through wealth, credit, and business formation, for example.

Business attitudes vary, with some seeing modest growth but a number of participants citing issues of confidence, both economically and politically related. Large firms are doing reasonably well as smaller firms struggle. For many firms, demand remains insufficient to motivate significant hiring and investment, and uncertainty, including uncertainty about the fiscal situation and the debt limit, has also limited expansion plans. Auto firms have done a good job of overcoming supply chain disruptions and expect higher near-term production and profits. State and local governments continue to lay off workers, and federal spending will also be a drag.

Financial conditions have been turbulent, reflecting the European situation, the U.S. debt limit uncertainties and fiscal policy, the S&P downgrade, and increasing concerns about U.S. economic growth, both short term and long term. In Europe, rising borrowing rates for Italy and Spain threaten a significant widening of their sovereign debt crisis, with implications for global markets. Questions remain as to whether European authorities can stabilize the situation. Reflecting this turmoil, bank funding conditions continue to tighten in Europe, and U.S. money

market mutual funds have reduced their exposures. There are also banking issues in the United States, as several institutions have seen sharp declines in stock values and rises in their CDS spreads. Credit rating downgrades could exacerbate that situation. However, the U.S. banking sector is generally stronger, with improved credit quality—for example, in credit cards—and lending conditions returning somewhat more to normal, especially for business borrowers. Negative deposit rates, however, are a striking development.

Inflation has recently moderated somewhat as prices of oil and other commodities have receded, although reports of attempts to pass through cost increases persist. Core inflation has been running high, but trimmed-mean and similar measures suggest that inflation remains controlled. Nominal wages have remained subdued. Survey and financial measures of inflation expectations have remained stable. Substantial uncertainties surround inflation forecasts, including the difficulty of judging the degree of slack in the economy. Measurements of the output and unemployment gaps are also important for assessing the ability of monetary policy to stimulate growth. However, the combination of inflation and unemployment that we currently see could be interpreted as putting too high a weight on inflation in our collective objective function.

I tried to make that organized. I don't always succeed. Are there any comments or questions? [No response] Let me just make a few comments. A lot of the main points have been taken.

I do think that the data we received during the intermeeting period were exceptionally disappointing, and in particular, unusually, they came from three separate sources. First, we had a two-year NIPA revision, which gave us a different perspective on the depth of the recession. Second, we had the downward revision to GDP in the first half of the year, particularly in the

first quarter. And then the intermeeting data on spending as well as the developments in the financial markets were, on the whole, pretty weak. So it clearly is the case that, since the last meeting, it's appropriate to downgrade our outlook for the economy.

One area of particular concern, I think, in terms of looking at the economic growth potential, is consumption. Even given the poor performance of income and wealth, consumer spending has been extremely restrained. There are various explanations for this. I think you could put together standard economic models to help understand it. Of course, one standard model is the permanent income hypothesis, which says that people spend based on their expectations of future income, whether it's cyclical or secularly induced. I think it's very notable that consumers may have been better forecasters than the FOMC in the past few years, because their pessimism has been quite striking. I took note of a Michigan survey question that has been asked since 1978: Over the next year or two, do you expect that your family income will rise more or less than prices will go up? In other words, will your real income rise? A strong majority of consumers now polled expect prices to rise faster—that is, they expect their real income to fall. The degree of that is the all-time low. It is in fact a little bit lower than in 1979–80—when inflation, of course, was much higher than it is today—and even much lower than during the recent recession. So people are very pessimistic about future income, whether correctly or not we don't know yet. Related to that and related to some of these leverage discussions, another popular model of consumer spending is the buffer-stock model, which says that people, generally speaking, do not have much wealth, and they try to maintain a moderate-sized buffer to protect themselves against various emergencies like health problems. As we know, through the crisis, we now have a great reduction in access to credit—for example, through home equity lines and through home equity in general. Financial resources have been

substantially reduced; income has become much more uncertain. People have required payments like rent and interest, gas, and so on. In that kind of world, people will also tend to be very conservative about spending given the uncertainty in the environment. That consumption is as cautious as it is is not unexplainable, but it certainly is one of the main factors that have been affecting the outlook. Now, there are some factors that might make things look a little better. Real disposable income may grow more quickly in the third and fourth quarters as energy prices decline. And, auto spending, which we've talked a lot about, may come back to some extent in the third quarter. All of that said, I think, as has been pointed out, that we've been repeatedly disappointed in economic growth overall. Consumer spending has been a very important part of that, and interpreting that, I think, is a very important issue.

Clearly, one of the factors affecting household spending and confidence is the labor market. I only want to make two observations here, both of which have been alluded to already. One is that simply looking at the deeper recession that we had, based on the revisions, may reduce the sense that there is some pent-up demand for labor. It could be that in some sense labor is about appropriate given the amount of demand and production going on. I think that should make us a little bit more pessimistic about future hiring intentions. The other thing that I found very striking, and David Wilcox mentioned this in his remarks, is that currently in the forecast the entire decline in the unemployment rate between now and the end of 2012 comes from the fact that unemployment insurance programs are being ended, leaving the unemployed to move from unemployment out of the labor force. Our government's anti-unemployment program seems to consist primarily of cutting off unemployment benefits so people won't report themselves as unemployed, and that's really not an exaggeration. I think that labor market conditions are quite concerning. Demand remains quite weak, and I think it remains the most

important single factor affecting the willingness of firms to hire and invest, although uncertainty and other issues are also at work.

I take note of the fiscal drag situation. We've been seeing, for example, as a very concrete example, 20,000 to 30,000 jobs a month being lost in state and local governments, which is pulling back overall job creation. We know there's very significant fiscal drag on the horizon coming from the federal side. We are hoping that there will be self-equilibrating factors in the private sector to offset that. We don't know that for sure, but we do know that fiscal drag is going to happen.

In the past few weeks, financial developments have been, of course, very important. I think the developments in Europe are having real effects, not just in Europe but also in the United States, by affecting optimism, risk-taking, and concerns about financial stability. And we have seen our own issues, of course, related to the debt limit. These financial developments since the last meeting are another major reason to cause us to downgrade our growth outlook.

On the inflation side, as always, we want to be vigilant about inflation, but with oil down almost 30 percent since its peak in April, with commodity prices in general down 15 percent from their peaks in April, with automobile prices receding, and with inflation expectations apparently reasonably stable, it doesn't seem that high inflation is a near-term concern. Of course, again, we'll always want to pay close attention to that.

Let me turn from this discussion of the outlook to try to say a few words to set the table for our policy discussion. As you know, things have been changing rapidly in the past few weeks. A week ago or so, when we sent out the statements for FOMC consideration, the way I was thinking about it was as follows: On the one hand, we had significantly downgraded the outlook for the economy while reducing our inflation concerns. That in itself would suggest a

serious consideration of additional monetary stimulus to try to achieve our dual mandate. On the other hand, a week ago we had a lot of uncertainty about both output and inflation in the second half. There was certainly some basis for waiting to see if we could learn more about how the economy was going to evolve. In addition, we had a second dimension of uncertainty, which is that besides deciding whether or not to take action, it's a question of what action to take. In our current regime, we now have, of course, a range of possible actions. It was my sense at that time that having further work done by the staff and having a full discussion in September about what, if any, action should be taken were probably the right ways to go. In that respect, it was my view about a week ago that a statement that reflected the state of the economy and indicated our willingness to respond as necessary would probably be sufficient. Over the past week, we've seen a number of developments, most prominently the very severe stresses in the financial system, including both the European stresses and those in our banking system—two banks, in particular, were mentioned earlier—as well as the response to the downgrade and so on.

Now, should we respond to those financial developments? As President Bullard mentioned, we don't want to be engaging in giving out free puts. I don't think that's what we're talking about here. I think instead that there are some important connections between what's happening in the financial markets and what's happening in the economy. First of all, financial markets are giving us information. They're telling us that there has been a general darkening of mood and expectations about where the economy is going. Second, financial conditions themselves have real effects on the economy. Not just lower asset prices, but increased stress and reduced risk-taking will affect the ability of the economy to recover. Moreover, I think at this point we're going beyond just lower asset prices and an increased risk of financial crisis. In

addition, the decline in commodity prices, which is part of this financial adjustment, is reducing inflation risk.

My view at this point, and I'm just going to put this on the table before the go-round so that everybody can comment and take the opportunity to respond, is that simply darkening our statement—putting that out there—and taking no action have one big and one small disadvantage. The big disadvantage is that I think the markets and the economy would react very poorly to that. It seems as though the Fed is saying that the situation has gotten significantly worse, but we're not willing to do anything about it. I think that would raise questions about what the Fed's thinking is, what our objectives are, and what we plan to do in the future. Perversely, also, if we don't do anything but suggest that we may, I have a concern that QE3 speculation may rise very significantly, and I actually would like to control that. I think all of us—potentially all of us—would think that it's not time yet, and we would much prefer not to get into that particular policy direction.

Is there something we can do today that would be meaningful, would show that we are engaged, that would indicate that we are taking a step to try to improve economic conditions and financial conditions, and that would give some clarity to our future plans but would still be something that would be a reasonable step in the current context? What I would like to propose is to consider the idea of changing the “extended period” language to refer specifically to mid-2013. That basically involves taking the “extended period” language from alternative A and putting it in alternative B, and the language would just say that the Committee now expects that the conditions that we've described, including low resource utilization and subdued inflation expectations, are likely to warrant very low policy rates at least through mid-2013. I think that doing that would be encouraging. As a response, it would be a reasonable response, a measured

response. Let me anticipate a few concerns about it. First, is this tying us down in a way that's dangerous or uncomfortable? First of all, I would just note that it is, of course, quite consistent with where markets are today. It's also consistent with the Tealbook. It's consistent with the Taylor rule, at least the '99 version of the Taylor rule. It's consistent with the Taylor rule applied to our projections. It's consistent with our optimal control analyses as well. So clearly, it's not an outlandish proposal. At the same time, I think it would have some benefit because it would cut off, or at least reduce, the probability of a near-term tightening, and again, it would convey the sense that the Fed is willing to try to support recovery.

President Bullard appropriately raised the question of contingency. Is this sufficiently contingent? Of course, the language is contingent. What it is saying is that we expect that these specific conditions will lead to a situation in which low rates are warranted. What I would suggest, and I think we'll have more discussion of this, is that going forward—perhaps at Jackson Hole and perhaps in September—we can spell out even more concretely how those contingencies tie into our policy so that it becomes explicitly a rule-based or reaction function type of behavior. In doing this, again, I think one of the benefits is that it will put a very high bar on QE3 as we focus on this action and on other actions that we might take, but I think that would be useful from a communication perspective. Will it do anything? Again, I think at this point, confidence and psychology are very important. I worry about us just leaving the situation completely unaddressed, and, as I mentioned, I think it would have some effect on rates via the expectation mechanism. I would note that there has been, for example, a lot of discussion about leverage. Keeping inflation from being too low and keeping interest rates low actually help reduce leverage, and so I think that it actually might have some direct benefit.



This is a suggestion. I want to put it on the table initially. I think we could do more. I think we could consider a commitment with respect to the balance sheet reinvestment policy as well, and I'm certainly prepared to discuss that, but my own view is that this is the minimum we should do if we want to avoid conveying essentially insouciance in the face of what is clearly a deteriorating situation. With those initial observations, let me ask Bill to make his initial comments, and then questions to Bill or to me will be fine, and then we'll do our go-round on policy. Bill.

MR. ENGLISH.<sup>3</sup> Thank you, Mr. Chairman. I'll be referring to the handout labeled "Material for FOMC Briefing on Monetary Policy Alternatives," which was distributed earlier. That packet contains the revised draft statements that we distributed yesterday as well as the associated draft directives.

Yesterday's revisions to the draft statements were intended to accomplish five objectives. First, a new sentence in paragraphs A.1 and B.1 recognizes the deterioration in financial conditions over the intermeeting period and especially in recent days. Second, additional words in paragraphs A.2 and B.2 clarify that the pace of the recovery is expected to be slower than was anticipated at the time of the June meeting, not slower than during the first half of the year. Third, the change at the end of the final paragraphs of alternatives A and B suggests that the main risk to the Committee's dual objectives is the weak recovery. Fourth, writing "although only in part" in the sentence about temporary factors in paragraph B.1 is intended to discount somewhat the importance of such factors in explaining the slow pace of growth this year. Finally, some small changes were made to paragraph 1 in all three alternatives in response to recent information about the labor market and energy prices.

Turning first to alternative B, on page 4, the Committee may view the information received over the intermeeting period as pointing to a notably weaker economic outlook than was expected at the time of the June meeting, but also to less moderation in inflation. Members may see temporary factors as accounting for part of the disappointing economic growth and higher inflation during the first half of this year, and so continue to expect that economic activity will gradually strengthen while inflation returns to a subdued pace. Although the Committee might now see the recovery as likely to be more gradual than anticipated at the time of the June meeting, members may judge the level of uncertainty about the economic outlook to be unusually high—and so choose to leave the stance of policy unchanged at this meeting, as in alternative B.

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<sup>3</sup> The materials used by Mr. English are appended to this transcript (appendix 3).

Even if they see the incoming data on output and employment as disappointing and increased downside risks resulting from the recent financial developments, members may believe that maintaining the current stance of policy is appropriate given the costs and risks associated with additional policy action. For example, they could be concerned that more-aggressive use of forward guidance or adjustments to the balance sheet could undermine public confidence in the Committee's ability or will to tighten policy sufficiently if needed, thereby boosting expected and actual inflation. Thus, policymakers may believe that it is prudent to wait for additional information bearing on the medium-term outlook before deciding on the appropriate course for policy.

As for the statement language, the first paragraph for alternative B would be updated to acknowledge that economic growth has been slower this year than the Committee had expected at the time of the June meeting, that overall conditions in the labor market have remained weak, and that financial conditions have become more restrictive. The statement would indicate that the slow pace of recovery and the rise in inflation this year appear to reflect, although only in part, temporary factors, and it would note that inflation has moderated recently as prices of energy and some commodities have declined from their earlier peaks. The second paragraph would be revised to note that the Committee now expects a somewhat slower recovery and only a gradual decline in the unemployment rate. The third paragraph would indicate that the Committee will keep the target for the federal funds rate at 0 to ¼ percent. This paragraph also retains the "extended period" language; as the Chairman noted, you might choose to substitute the firmer "extended period" language from alternative A here. The statement also reiterates that the Committee will maintain its existing reinvestment policy, and it would end by stating that "the Committee will carefully assess the economic outlook in light of incoming information" and that it will either "act as needed" or "employ its policy tools as appropriate" to "promote a stronger pace of economic recovery in a context of price stability." An explicit reference to using "policy tools" would likely be read by investors as signaling a greater willingness to implement additional policy accommodation if economic growth does not pick up.

A statement along the lines of alternative B would be about in line with the expectations captured by the Desk's survey of primary dealers last week. However, as Brian noted in his briefing, investors have become more concerned about the economic outlook in recent days and reportedly have marked up the odds associated with policy action at this meeting. Thus, the release of a statement like alternative B, with a relatively downbeat assessment of the economy and no policy action, could disappoint some market participants. Bond yields could increase and the foreign exchange value of the dollar rise. Equity prices could decline somewhat.

Alternative A, page 2, would be appropriate if policymakers view the weak economic growth as likely to persist and see inflation falling back to levels consistent with the dual mandate. The sequence of downward revisions to the outlook since the start of the year, coupled with the sluggish first half reported in the revised NIPA data, might lead the Committee to conclude that the reasons for the sharp slowdown

in economic growth in the first half extended well beyond identifiable factors that are likely to prove transitory, and will restrain the pace of recovery going forward. As David noted in his remarks, even with the somewhat better-than-expected employment report on Friday, the labor market remains very weak. And while inflation may not have slowed as rapidly as some of you anticipated, with substantial economic slack and modest increases in labor costs, you may see inflation as likely to remain subdued over coming quarters. At the June meeting, many participants felt that the outlook was unusually uncertain and that additional information was required before deciding on the next policy step. With the incoming data over the intermeeting period suggesting an even weaker outlook for economic activity, some participants may feel that it is now appropriate to provide additional accommodation, as in alternative A. Moreover, you might feel that the downside risks to the outlook—including a further deterioration in the housing sector, an unexpectedly large near-term fiscal tightening, the substantial strains in domestic financial markets, or a wider and deeper crisis in Europe—have become more palpable over the intermeeting period and now call for some policy response.

Compared with the statement under alternative B, the statement for alternative A would indicate somewhat more concern about the strength of the recovery and a bit less confidence that temporary factors account for a significant portion of the slowdown in economic growth this year. Paragraph 2 would be similar to its counterpart under alternative B but would note heightened downside risks to the outlook for economic growth. Regarding monetary policy, alternative A would include two steps to provide additional accommodation. First, paragraph 3 would provide more-explicit forward guidance about the expected path for the federal funds rate by specifying that exceptionally low levels were likely “at least through mid-2013.” Second, paragraph 4 would announce that the Committee will provide additional support for economic recovery by selling \$400 billion of shorter-maturity Treasury securities and simultaneously purchasing a similar amount of long-term securities. This action would put additional downward pressure on longer-term interest rates by removing duration from the market and so would help foster financial conditions that would be more supportive of growth. The statement for alternative A would end by suggesting that the Committee was willing to take additional action to support the recovery.

Although expectations may have moved in recent days, market participants would probably still be surprised by the adoption of alternative A. Interest rates and the foreign exchange value of the dollar would likely fall, and stock prices would probably increase.

Alternative C, page 6, might be appropriate if the Committee viewed the disappointing progress of the recovery so far this year as largely attributable to temporary factors or to a lower level of potential output. The statement under alternative C would note that economic growth has been modest of late, but would attribute more of the slowdown in growth this year to factors that are proving to be temporary. The statement would also express more concern about inflation, noting that firms have faced cost pressures from higher prices for commodities and imported

goods, and that the risks to the inflation outlook are tilted to the upside. Paragraph 3 would state that the target for the federal funds rate will remain 0 to ¼ percent and reiterate the “extended period” language. But it would also indicate that the Committee was maintaining its existing reinvestment policy only “for the time being,” and so suggest that redemptions could begin relatively soon.

The adoption of alternative C would greatly surprise market participants and would likely have substantial effects in financial markets.

Draft directives for the three alternatives are presented on pages 7 through 9 of your handout. Thank you. That completes my prepared remarks.

CHAIRMAN BERNANKE. Thank you. Are there any questions? President Lacker.

MR. LACKER. Yes. The sentence that appeared yesterday, “Financial conditions have become more restrictive”—I can understand the equity markets’ behavior contributing to that characterization, but how do you think it’ll be interpreted against things like mortgage rates and other rates that have not risen and, if anything, have fallen? Treasury rates, of course, more broadly have fallen precipitously.

MR. ENGLISH. That’s right, though as you say, equity prices are down a lot, risk spreads are wider, and I think that on net, we view them as more restrictive in terms of their implications for economic growth.

CHAIRMAN BERNANKE. President Lockhart, two hands.

MR. LOCKHART. I had the same question as President Lacker because if you think about the debt markets—the 10-year Treasury, the number of things that are priced off the 10-year Treasury—it’s hard to say that this has created financially more-restrictive conditions across the board. I think it’s the equity markets themselves and potentially the wealth effect down the road. But I had the same question, and I’m glad President Lacker brought it up.

CHAIRMAN BERNANKE. Are there others with this concern? President Fisher.

MR. FISHER. Yes. Why not say “financial conditions have become more volatile”? I don’t believe, particularly after Governor Duke’s intervention and the point that Dennis just

made with regard to Treasuries, that you could argue, other than the downturn in the equity markets and a slight widening in spreads, that financial conditions have become “more restrictive.” Volatile? Yes. Restrictive? I’d question that.

CHAIRMAN BERNANKE. All right. Shall we just delete the sentence? Any objection? President Kocherlakota, you were supporting that view, right?

MR. KOCHERLAKOTA. I was supporting President Fisher’s view.

CHAIRMAN BERNANKE. Why don’t we just delete the sentence then?

MR. ENGLISH. You could say financial conditions have been volatile as a way of acknowledging recent developments.

MR. FISHER. Everybody knows that.

CHAIRMAN BERNANKE. Why don’t we just delete it?

MR. FISHER. Delete it.

CHAIRMAN BERNANKE. Any other questions for Bill? President Plosser.

MR. PLOSSER. I have one question. In the same first paragraph, I was puzzled a little bit by where we said the pace of recovery appears to reflect “in part,” and we added “although only.” What does “although only” add to this discussion—what was the purpose of adding that? Because “in part” is “in part.”

MR. ENGLISH. I think the intention was to downplay to some degree the importance of the temporary factors.

MR. TARULLO. Bill, wasn’t that intended in part to change the language from this last statement and to suggest that there’s been some shift since the last statement?

MR. ENGLISH. I agree. The last statement certainly used “in part,” and so “although only in part” would suggest a downshift in that knob.

CHAIRMAN BERNANKE. Any other questions? [No response] Are we ready for the go-round? Governor Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I consider the case for policy action compelling. Even though transitory factors played a role in depressing growth during the first half of the year, the data we have received since June revealed broad-based weakness that is very likely to persist. How can a forecast in which resource utilization and inflation both linger at levels below the Committee's targets possibly be consistent with an optimal monetary policy? At the very minimum, we should ease policy until our medium-term inflation forecast is centered on 2 percent. The argument for policy easing becomes yet stronger when we consider the balance of risks to economic activity and inflation. The downside risk to growth is particularly serious now because the potential for fiscal policy to respond in the event of a downturn is limited, if not nonexistent. Should those downside growth risks materialize, we would likely be facing significant disinflationary risks, too. Our arsenal is not empty, and we should avoid any inclination to save our ammunition until a later date.

I strongly support your proposal to substitute the language related to "extended period" proposed in paragraph 3 of alternative A for that in alternative B. As you mentioned, such forward guidance would be broadly in line with the implications of the staff's estimated outcome-based policy rule and with FRB/US model simulations of the Taylor 1999 rule. Both of those rules prescribe a funds rate trajectory that remains at the zero lower bound until the second half of 2013, at which point the unemployment rate would be in the vicinity of 7½ percent and inflation would be around 1½ percent. I would also note that the optimal control rule calls for significantly later action to raise the funds rate off its lower bound at a significantly lower unemployment rate.

To further enhance the clarity of our forward guidance, I believe it would be helpful to provide more-specific quantitative information about the economic conditions that are likely to warrant the continuation of exceptionally low levels of the funds rate. For example, I would propose language along the following lines: “The Committee anticipates that exceptionally low levels for the federal funds rate are likely to be warranted as long as the unemployment rate exceeds 7½ percent and the medium-term outlook for inflation remains subdued. The Committee currently expects those economic conditions to prevail at least through mid-2013.” Such a formulation seems roughly consistent with the implications of our June economic projections, which had a central tendency of 7 to 7½ percent for the unemployment rate in 2013:Q4 and a central tendency of 1½ to 2 percent for overall PCE inflation in 2013. Providing a quantitative threshold for the unemployment rate would also underscore the conditionality of our forward guidance and hence might help ensure that the public interprets the reference to a calendar date—namely, mid-2013—as a forecast, not an unconditional promise. Indeed, this approach would help the markets and the public understand how a shift in the economic outlook would be likely to affect the anticipated timing of policy firming. For example, if there were a further downward revision of the economic outlook, investors would recognize that the 7½ percent unemployment threshold would not be reached until a later date, and hence they would push back the anticipated time of policy liftoff.

I’d also like to suggest one further change—to paragraph 4 in alternative B to make it a bit more forward leaning. I would propose changing the word “will” to “is prepared to.” In other words, I propose, “The Committee will carefully assess the economic outlook in light of incoming information and is prepared to employ its policy tools as appropriate to promote a stronger pace of recovery in a context of price stability.”

Looking toward September, without a clear improvement in the outlook, there are a number of reasonable options for policy action that we should consider. For example, I think that extending the duration of our Treasury holdings along the lines suggested in alternative A has some merit. Such a program is attractive because it might push down longer-term yields, including mortgage rates, and might offer greater support to the housing market. Another promising approach would be to establish some sort of peg or cap on shorter-term interest rates. Because capping rates at the short end involves buying at the short end, whereas lengthening the duration of our portfolio involves selling at the short end, we would need to analyze which alternative approach is preferable. I'm somewhat less inclined to make further cuts in IOER, but I would certainly be willing to entertain such an approach. At any rate, given the plethora of policy tools and the potential urgency of taking some further action in September, I hope we can plan on having a two-day FOMC meeting to ensure that we have enough time to consider the various options and to make specific decisions as appropriate.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. PLOSSER. Mr. Chairman. Excuse me.

CHAIRMAN BERNANKE. Sorry. President Plosser.

MR. PLOSSER. Can I ask Governor Yellen to read her revised sentence—just to make sure I got it?

CHAIRMAN BERNANKE. Certainly.

MS. YELLEN. “The Committee anticipates that exceptionally low levels for the federal funds rate are likely to be warranted as long as the unemployment rate exceeds 7.5 percent and the medium-term outlook for inflation remains subdued. The Committee currently expects those economic conditions to prevail at least through mid-2013.”



MR. PLOSSER. Can I ask a question? You attached a specific number to the unemployment rate, but inflation “remains subdued”?

MS. YELLEN. Correct. The “medium-term outlook for inflation remains subdued.”

MR. PLOSSER. Why—okay. Thank you.

MR. FISHER. You wouldn't be willing to put a number on that—2 percent, or a number?

VICE CHAIRMAN DUDLEY. We could talk about that.

CHAIRMAN BERNANKE. Certainly we can talk about it, or that's a step we could take next time—either way. Michelle, did anyone get this? Is it possible to circulate that sentence?

MS. SMITH. I can get you copies.<sup>4</sup>

CHAIRMAN BERNANKE. Okay. Any other questions? President Evans.

MR. EVANS. Thank you, Mr. Chairman. Although it might be standard to say that another meeting's worth of data might resolve uncertainty, the most recent NIPA revisions have answered enough of these questions for me. Without substantial clarification of our policy intentions in line with our dual mandate responsibilities, I think there's a distinctly high probability that we will continually revisit these periods of anemic growth without ever escaping the current malaise. Consequently, I favor a strong indication today of additional accommodation. I think alternative A is certainly a plausible demonstration of that. Alternative B doesn't do that. I am quite attracted to the suggestion that you're making today and to Governor Yellen's proposal. So let me talk about a few things in that regard.

Governor Yellen says that she would entertain this accommodative monetary policy to better center our inflation forecast at 2 percent, which is our objective. I would do more. I believe clarifying our policy framework in order to better achieve our dual mandate

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<sup>4</sup> The material distributed by Ms. Smith is appended to this transcript (appendix 4).

responsibilities would help provide further policy accommodation, at least along the lines suggested in Eggertsson and Woodford, and this helps by defining that as extending through mid-2013. What is clarity? Conducting monetary policy in accordance with our dual mandate should mean that as long as high unemployment is generating an extraordinary policy loss, the FOMC is willing to provide very large amounts of accommodation and tolerate medium-term inflation substantially above 2 percent. I want to thank President Hoenig for listening to me earlier, and I certainly take your point.

MR. HOENIG. I'm listening.

MR. EVANS. As I mentioned earlier, a 9 percent unemployment rate against a very conservative natural rate of 6 percent generates a policy loss that is as large as if inflation were running at 5 percent against a 2 percent objective. But my stronger point is this: We talk and act as if 2 percent is an almost unacceptable inflation rate and a ceiling that limits further policy accommodation. A couple of examples: First, the common view seems to be that we will consider further LSAPs and more only if the risk of deflation is significant. I'm glad there's a floor, but the ceiling is too low. Second, in an interview the other day, Don Kohn—for whom I have the highest regard—spoke in the following way. He said that additional quantitative easing might be appropriate if inflation keeps coming down. His option for QE3 was handcuffed by an inflation ceiling that's too low in my opinion. Today's medium-term inflation pressures are overstated. I do not see how this ceiling-like framework is consistent with our dual mandate responsibilities, at least not if the ceiling is 2 percent. Our objective can be 2 percent. We should average that, but it shouldn't be our ceiling.

In favoring alternative A, I'm attracted to the additional commitment—defining “extended period” to be at least mid-2013. I certainly support that. I suspect that we would have

ended up there anyway. So we should reap the benefit of reducing the uncertainty. I'm also quite attracted to the additional language that Governor Yellen used in terms of stating that this could be appropriate as long as the unemployment rate is above 7½ percent. But again—and I don't have the exact language—regarding “as long as medium-term inflation is subdued,” I would agree with that if we understood better that “subdued” could include 2½ percent in the current environment or even 3 percent. But I do like that type of language.

I think we need to avoid signaling that we're AWOL, and so I agree with your suggestion, Mr. Chairman. One thing that does seem missing in the current formulation of alternative B, as I understand it, is that it doesn't include the characterization that the downside risks have increased, and I wonder how that would be interpreted. I really think that should be included. Alternative A has language like that as well as, frankly, I think, a better description of the temporary factors. I would have been happy to take paragraphs 1 and 2 from alternative A, but I'm quite happy to support your suggestion, Mr. Chairman. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. Well, I came into the meeting supporting alternative B, at least as of Sunday afternoon, and I am prepared to support your recommendation, Mr. Chairman, about transferring from alternative A to alternative B the language that basically employs the idea of it being explicit about the time frame of “extended period.” I see that as a modest, almost minimalist, but probably meaningful recognition of what's happening at the moment, and it certainly overrides the wait-and-see approach that, short of yesterday's events, I might have recommended. I think this is a well-calibrated action. It's responsive, concrete, but not overreacting. In some respects, I think it buys some time for more-deliberate planning. I very much support Governor Yellen's suggestion. Others have made the

same suggestion of having a two-day meeting in September to have enough time to do that. And I don't mean to sound cavalier, but I also don't think an explicit time frame on "extended period" is irreversible. I think most observers understand the conditionality of our policies and statements. I think that if we were surprised to the upside in terms of economic growth and the circumstances of the economy, we could certainly reconsider it.

I have to be a little cautious. I'd like really to hear more discussion regarding Governor Yellen's suggestion of an explicit quantification of an unemployment trigger. It just seems to me that being explicit on that while being more general and not explicit regarding the inflation situation may create some misinterpretation. There may be a whole lot of questions about how we chose that particular number. So at this particular juncture, I guess I just feel it's better to be non-explicit than explicit on that. I would like to hear more about what other people have to say.

A small thing regarding wording in the statement. I supported the idea of moving from "will act as needed" to "will employ its policy tools as appropriate." I understood that the drafters thought that was stronger language, and I supported it from the point of view of it being stronger language. I think we need a very strong statement combined with a modest action at the moment. And I do support the suggestion that Governor Yellen made—that is, to change the very last paragraph to "is prepared to." I think, again, the economy and the market are hoping to hear that we stand ready to act. We will show that with the Chairman's recommendation, but I think standing ready to act further is appropriate. That relatively small change of verb conveys that. Those are my thoughts, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. There is a two-hander.

MR. TARULLO. Mr. Chairman. Could I just intervene here? I wonder whether, in order to crystallize points of agreement or disagreement, it might be useful—I don't want to put the onus on either Charlie or Janet—for one or both of them to briefly describe what is, in effect, the transmission mechanism that they would expect. That is, if we adopted your language, Janet, how would you see that affecting the economy? And thus, why do you think it's an efficacious step to take right now? Because I think some of the points of disagreement arise because people are skeptical that a step will have an effect, and if we could specify that and maybe talk about that as well as language, it might be helpful in reaching some consensus.

MS. YELLEN. Okay. Let me be clear that I would support the language in A.3 and think that the language I've proposed is consistent with what's there. And the reason for its being useful even though it coincides with market expectations is that it does show concern, and it does indicate that some transitory pickup in economic growth in the next quarter or something is not going to cause us to move off "exceptionally" or "extended period." It takes some upside risk off the potential that we would be raising the funds rate. I guess the reason that I like the quantitative threshold pertaining to unemployment is that it gives a clearer rationale for how we came up with this particular date and, by making our reaction function clearer, shows that we want to see a sufficient improvement in the economy before we would consider lifting the funds rate—as long as, I wrote, "the medium-term outlook for inflation remains subdued." I'm not sure if that's the best language. One could say "as long as the medium-term outlook for inflation is consistent with the dual mandate." That might be more general, and President Evans might like that better. The idea is that there's an escape clause having to do with inflation, but we're giving a sense of concreteness. What do we expect to see before we would contemplate raising it? And given that the outlook can weaken or it can strengthen, we're bringing into play a

helpful and stabilizing market mechanism. Bad data? Markets automatically say, “Wow, 7½ percent—that’s not going to occur until 2019. The Fed’s going to be on hold for years and years. It’s a lot longer than 2013.” Or vice versa in the event that we get strong data. That’s what I’m seeing is the advantage.

MR. TARULLO. That’s helpful. Thanks.

CHAIRMAN BERNANKE. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. The staff studies on additional monetary policy options were quite helpful. I would find it both timely and helpful to explore these options in detail, as, to date we have spent far more time managing risks associated with the exit strategy than managing the risks associated with the need for additional stimulus. Unfortunately, we do not have time in a one-day meeting to fully discuss the memos. I strongly support the September meeting being two days to more fully map out action should the economy continue along this path. In particular, it would be useful to try to roughly calibrate the effects of the various policy options. If we are looking to have an impact equivalent to at least a 25 basis point cut in the federal funds rate, which combination of staff suggestions meets this hurdle? That way, the Committee could more clearly evaluate the options based on the impacts on the economy and the difficulties in unwinding the policy when that became appropriate. This would allow a better assessment of the costs and benefits of further accommodation options. I’m increasingly worried that what we viewed as a tail occurrence is becoming the most likely outcome, and we have not yet fully prepared for the policy options should that result.

If we were not at the zero bound, I have little doubt that we would today be considering at least a 25 basis point easing. Most of the reaction functions discussed in the Tealbook B, imply that we should be easier than we were in June. I am not certain that alternative A provides

the best way to achieve further easing. I fear that the change in language we have discussed does little to signal further easing. It says that exceptionally low levels of the federal funds rate are likely to be maintained at least through mid-2013, but this matches the path of the federal funds rate that the market already expects, as described on page 53 of Tealbook A. A statement that matches current market expectations is not likely to have much of an effect on market rates.

My own sequencing of accommodation would be as follows: Step 1, I would announce a fixed ceiling on Treasury securities through 2012 and a fixed floor on the balance sheet through 2012, with an escape clause if the unemployment rate falls unexpectedly below 7½ percent or the core inflation rate unexpectedly rises above 2½ percent. I would couple this with lowering the interest on reserves 25 basis points. Foreign branches hold many of the reserves, and reserves pay 25 basis points while three-month Treasury bills have paid close to zero. This amounts to a subsidy for foreign branches. I see no reason to subsidize foreign branches with our interest on reserves, and coupled with the new language, I would expect this would amount to the equivalent of a 25 basis point easing. Should further easing be necessary, I would extend the period of the ceiling on Treasury securities and the floor on our balance sheet with communication that the floor and ceiling would continue unless the unemployment or inflation triggers were reached. We could continue to extend out the period of ceilings and floors until we had greater confidence of achieving desirable monetary policy goals. If the floor and ceiling were extended to three years and more accommodation was still needed, I would begin by first extending the maturity of the SOMA holdings by exchanging short-term securities for long-term securities. If that proved insufficient, I would then expand our balance sheet with purchases of longer-maturity securities.

In an unconstrained world, I would take step 1 today. Given the limited time to fully discuss alternative options, I would prefer to take all of the language in alternative A but exclude

paragraph 4. I would include Governor Yellen's language, and I would actually use core inflation of 2½ percent as the second trigger. I view Governor Yellen's proposal as changing something that is highly conditional to something that's unconditional unless the triggers are hit, and so I think it is a much stronger statement to use Governor Yellen's language. Now, we've somewhat boxed ourselves in by using inflation at the medium term because we're talking about a short period of time, and we're talking about inflation. We're in effect trying to forecast oil prices. So I would use core inflation at 2½ percent to take care of President Evans's concern. And I would use core inflation, but since I doubt I will get consensus on that, I would be comfortable with Governor Yellen's language. Thank you.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I support alternative B for today. As I said earlier, our goal is to acknowledge the reality of slower-than-expected economic growth and the difficult situation in financial markets and to remain prepared for a policy move in the event that the expected rebound in the second half does not materialize. More aggressive action than that today, in my view, could be counterproductive. Number one, it will be viewed as trying to compensate for a failure of the Congress to effectively address medium- and longer-term fiscal uncertainties. Number two, stronger action today will definitely emphasize the idea, already popular in financial markets, that there is a Greenspan-Bernanke put on the equity markets. Both of these will be damaging to our credibility, in my view, and credibility is our most valuable asset. Markets are not expecting much action at this meeting. So I think we'll be consistent with those market expectations if that's the way we play this. This does not prohibit us from having meetings during the intermeeting period if we think that the situation is deteriorating further or that we're simply going to have to take action.



Now, on the extended period through 2013, as I said earlier, I do not think we would be wise to tie policy action to the calendar. We've already been burned by this twice, and if we do it today, we'll be headed down for a third time. The data have a way of contradicting what you expect. If you track the macroeconomy for a long time, you know that there are wide bands of uncertainty, and the economy could be in a completely different place from what you expect two years out. The 90 percent confidence intervals are so wide as to be laughable. So I do not think you should tie it to a calendar date. It will look very political to delay any rate hikes until after the election. I think that will also damage our credibility. I also doubt that we can credibly promise what this Committee may or may not do two years from now. So I don't think it's all that meaningful. I think that going with the 2013 language will put us in a box that we may not want to be in going forward. Further, as I emphasized earlier, this move could backfire badly. This would keep policy rates at zero for at least four and a half years, unless we decide to renege, which will cost us some credibility chips if we want to do that. Japan has been at zero for a decade and a half, and that policy has definitely not produced price stability. Instead, they got mild deflation. There are good theoretical reasons for why they would get that and why that has occurred. I think we have to be more cognizant of this than we are around this table. Worse, if we do get on that kind of a track and inflation expectations start to drift down because of this policy, monetary policy will actually be getting tighter, not easier, exactly at the point where we're trying to provide stimulus. I also agree with President Rosengren that to be effective, a move of this type has to go beyond what markets already expect, and I think that we've established at this meeting that the markets are expecting the policy rate, given the recent data, to be at zero through 2013. So this would only ratify market expectations. It wouldn't have any

stimulative impact of the types emphasized by authors like Gauti Eggertsson and Mike Woodford.

I also disagree with the Chairman on the QE3. I do not think we will be able to avoid a discussion of QE3 going forward, as much as many of us may like to. This is our most potent weapon, and it's more promising as having effects on the economy—and we can debate what those effects are—than any of the other tools in our toolbox. This is because the QE program influences inflation expectations and therefore has potential to drive real interest rates lower if that is what the Committee desires. The most important aspect of a further QE program would be to purchase or sell securities in response to economic conditions instead of according to calendar dates. If we had this program in place as of today, we could simply announce a certain amount of purchases today, and that would be a much simpler way to react to events than what we're forced to contemplate, which are alternative policy actions. We could behave much more as we would in an interest rate environment where we would lower the policy rate in reaction to worse-than-expected economic data.

The new language suggested by Governor Yellen to tie the fed funds rate move to a 7.5 percent unemployment rate sounds super risky to me. I might remind the Committee that Europe has not seen 7½ percent unemployment, except on rare occasions, over the past two decades. We really have no idea where the unemployment rate may or may not be going as we go forward in time because we have that little of an understanding of what causes and perpetuates high unemployment. The European example is one that should give us pause about tying anything to a specific number. To me, that would be a very large move with very little thought behind it at this juncture. I would certainly like to see a lot more study on that before we would tie it to a specific number. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. May I defer two or three slots until I have listened to others, Mr. Chairman? I'd like to hear some more arguments.

CHAIRMAN BERNANKE. Sure. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. You know, I keep coming back to the fact that the fundamental problem is, we have issues outside of monetary policy that we're not willing to address, and this country has a problem—an economy that has systematically consumed more than it produces. And that means leverage has to continue to increase, and we have to move that forward. If we're going to take care of our employment problem, we have to increase production. And I keep asking the question as I look at the projections—that's why I was asking Dave about the investment outlook. It's going down, not up, even though we have dumped tons of money into this economy of ours, and here we are. How is further quantitative easing or further guarantees of zero rates going to take care of the fundamental problems that we're not willing to step up to as a nation? I think that the central bank should be pushing other elements of this government to address long-term problems when it's not. The same thing is going on in Europe where you've got the central bank in Europe now doing a bridge loan so they can have time to get their bailout, which the markets are already saying isn't going to be enough. And we have a problem in this country where we need to be boosting investment, and it is languishing.

I think that monetary policy that goes and says things about 2013 is going to have a temporary effect for today, which will die off very quickly, and we're going to be back here again. We are going to be talking about QE3 until we take care of these long-run problems. And I think we're in a box, and we need to be pushing other sectors of this economy toward longer-

run solutions, and we're not willing to do it. So I'll leave it at that. My parting words, Richard.

[Laughter]

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. I recommend taking no action today, as proposed in alternative B. I'd prefer the language to be a little bit different, and we've already made one change. I think our goal should be to be careful not to feed a panic by an excessively negative characterization of the economy, but also not to appear that we have our heads in the sand and don't know what's going on. That's clearly a delicate balancing act. We need to be prepared to act in certain circumstances in the future, but we also want to avoid knee-jerk reactions.

My argument for standing pat today is based on five related factors. First of all, I think it's too soon to tell the extent to which the disappointing economic data are telling us that the current weakness is temporary and will soon abate, or alternatively, that the economy has entered a more persistent regime of slower growth, driven by some combination of headwinds, supply-side disruptions, and lower potential GDP growth. That scenario of lower GDP growth plays into what President Bullard said. Europe is in a world where they haven't seen unemployment rates below 7.5 percent for most of the decade. We may be headed for that world as well, and monetary policy is not the solution to that problem. I don't think we have enough data in hand at this point to firmly establish between these alternatives, but clearly the nature of the shock that we face here should govern, and will guide, the type of response we have. We will always be uncertain, of course, but we must guard against reacting too quickly when we don't know. That leads to my second point, markets have no doubt been volatile, but I'm very dubious of changing the course of monetary policy at a time when the change could be interpreted as a direct reaction

to the turbulence in the stock market, the S&P downgrades, or the policy actions in Europe. It's important that financial markets recognize that a systematic approach to achieving our dual mandate helps policy avoid exacerbating the effects of asset price swings on the economy. Our credibility would surely suffer if markets perceived us as directly responding to stock market prices. And whether we say we are or not, I worry that the perception will be there, and the next time the stock market moves overly aggressively one way or the other, we will be called to action. Third, I'm very dubious that even more accommodative monetary policy is likely to be a potent tool that can speed up the renormalization of the economy. As much as I might like it to be, the evidence seems to be dubious on that front. I think that the portfolio balance effects on the yield curve that we would be counting on in alternative A policy, or Operation Twist, are likely to be miniscule. They are easily overwhelmed by actions of investors in flight-to-quality moves or by shifts in the Treasury supply of securities at various maturities. Fourth, in addition to being ineffective, further action might actually be bad news. Our near-term zero interest rate policy is creating distortions in the market and real challenges for banks and money market mutual funds, not to mention the repo market. As Governor Duke said, banks are turning away very large deposits because the cost of taking these deposits exceeds any return the bank can expect to earn on them. At least one money market center bank is charging depositors to keep larger than their typical amount of funds in the bank. This is an unprecedented action, and we don't really know how this will play out. We've had a zero interest rate policy now for a long time, yet economic activity has moved both up and down, and it isn't clear that further action will change that pattern. Fifth, monetary policy cannot and should not substitute for fiscal policy. Fiscal policy in this realm may be more effective than monetary policy in dealing with some of our concerns. If we overreach and promise more than we can deliver, we will

undermine our ability to achieve both our mandates by losing credibility. At the risk of being somewhat flippant, I will say it anyway. I'm reminded of the old story that, given the path of the economy, insanity is characterized by repeating the same action over and over and over again, hoping you will get a different result. So based on these five factors, I prefer to stand pat and carefully monitor the incoming financial data.

You might ask, what might motivate me to reenter in terms of policy? Well, I think they both have been alluded to. I certainly think that developments in Europe pose the risk of significant financial disruptions to the economy. We cannot solve their problems for them, but we have to act if financial disruptions and dysfunctions in the financial markets spin off from events in Europe. We need to be prepared to support financial stability and the payment systems, and we need to do so explicitly for those reasons, not saying that that it will speed up the necessary structural adjustments in the real economy that we need to work through. To the extent there are financial strains in dollar funding in Europe, we already have the swap lines in place. But should that spill over and create dysfunction, I'd be prepared to move and act aggressively on financial stability. I think we should continue to act if the accumulated data suggest that the economy is in a protracted period of slow growth and is vulnerable to negative shocks. And more important, if significantly declining inflation expectations—not just deflation—were to happen, we might want to act further.

Turning to language, I generally supported alternative B. I have some preferences. I think we removed one sentence that I agree with President Lacker on—"financial conditions." I think that the "although only in part" phrase was unnecessary, but I don't want to hang on that. I think the tone of the statement could be read as a signal that we have already decided that further accommodation is needed and will be forthcoming. I think it's very important we be careful

about setting those expectations. I think it's premature. We can meet in intermeeting periods if we need to, as President Bullard suggested. I don't think we want to convey a sense of panic to the stock market. That would not help them. A voice of stability and reason, I think, is still a role that we can play.

In terms of the change, Mr. Chairman—in terms of “extended period”—I am torn there. I don't think it will do much good. Since it matches where the market already expects us to be, I don't know that providing that date will help. I'm generally, like President Bullard, not in favor of time-dependent policies—I prefer contingent. In that sense, I think Governor Yellen's recommendation is an interesting one, but that would be a huge step. And we run the risk of confusing the markets and, in fact, even this Committee without making our contingent policies more explicit and thinking about exactly what those numbers ought to be. I have some sympathy for moving toward systematic policies like that where we can articulate them, but I think doing it at this juncture would be risky. But I'm willing to entertain further discussions about that. In fact, I think that the statement as it is, as I think President Hoenig suggested, will not—I wish, but I don't think it will—quell demands, requests, and speculation about QE3. That will be rampant in the marketplace. I don't think we will be successful in calming that by this action, and indeed, we may even be fostering more discussion about it going forward. One more statement about language. In paragraph 4 of alternative B, where we changed the language to “promote a stronger pace of economic recovery in a context of price stability,” I don't like that language. I would prefer that we just stick to what we've said, which is that we will “act as needed to best foster maximum employment and price stability.” I don't see a particular need to change that. Again, it will raise speculation in the marketplace about, what do we mean by that?

Are we preparing to do something different? And I would prefer to stick with the original language on that. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. On your point about communications, I do face a speech in a few weeks. And I'd be more than interested, either now or in some other context, in taking instruction from this Committee about how you want me to phrase it. And in particular, one thing I could do—I know there's not unanimous agreement on this—is downplay that particular option in favor of continuing to look at options, et cetera. But that's something we could discuss.

CHAIRMAN BERNANKE. Governor Tarullo.

MR. TARULLO. Charlie, could you just give us an idea of what kind of action you might consider in the event that you became convinced that economic growth was substantially slowing and that inflationary expectations were declining?

MR. PLOSSER. Well, I think I would respond by saying there would be two pieces to that. One is why we think the growth is slowing. If I thought that basically we were facing lower potential growth rates on into the future, I'm not sure monetary policy can do much about that—the right policy responses are probably different. However, if I thought inflation was beginning to fall to unacceptably low levels—and President Evans and I could talk about when that trigger might be met, but certainly deflation would fall into that category—we would talk about policies where we would want to raise inflationary expectations to prevent that from happening, which would also help on the side of lowering ex ante real interest rates. So those would be the ways I would think about. But it would depend on the real side, what we thought the source of the shock was. How temporary do we believe this is? If we are moving into a world, as President Bullard suggests, of a European steady state of low economic growth and a very high unemployment rate, that's going to call for a different set of policies.



CHAIRMAN BERNANKE. President Evans.

MR. EVANS. If I could just ask a question, because I know that President Bullard mentioned that an unemployment trigger of 7½ percent could be super risky, and I thought you mentioned it this way earlier, President Plosser. Governor Yellen's proposal has jointly with the unemployment rate trigger the admonition that inflationary pressures ought to be—and we can disagree over what it is—subdued or some number. In pointing to unemployment, do you have in mind some risk beyond the inflationary risk?

MR. PLOSSER. I didn't say the word "risky." I just said I think we need more discussion about what that number ought to be. If we want to talk about it in the September meeting, I'm willing to have that conversation. But I think there's more uncertainty, it seems to me, about what we think the path of the unemployment rate's going to be and what's appropriate. I think that's a subject for debate.

MR. EVANS. As long as you've got the inflation safeguard—I mean, I could say 6 percent unemployment. And as soon as inflation got up to like 2¼ percent, that would come out of that conditionality. So I'm not quite sure that's such an issue.

MR. BULLARD. I called it risky, so let me clarify what I meant. I think there's a large literature that says, as I interpret it, that we don't understand why unemployment is very high in some countries and states—there's hysteresis in unemployment, and there are all these papers about comparing U.S. with European unemployment. That tells me that unemployment is a difficult variable to understand, and I wouldn't want to tie policy numerically to it. Of course, we're all very concerned about unemployment. And I'm very concerned as well, but I wouldn't want to tie policy numerically to unemployment for that reason, because I think it's one of the least-well-understood variables of all the variables that we look at.

MR. TARULLO. But what's the risk, Jim?

MS. YELLEN. Because, if you're right, you have an inflation escape clause there.

MR. BULLARD. Sure. Having said what I said about the literature, I'll also say that I agree with President Plosser that making it state contingent in that way is something we could study and look at, and I'd be willing to look at it further.

CHAIRMAN BERNANKE. I'm going to call on President Williams and then President Fisher, if he's ready, after that. President Williams.

MR. WILLIAMS. Okay. Thank you, Mr. Chairman. I support alternative A. And given the significant downgrade to the outlook for output and unemployment, and the heightened risks to the recovery, I think an additional accommodation is needed for the very reasons that you said. In this regard, I, too, very much appreciate the very helpful staff memos on possible policy actions for providing additional monetary accommodation. In following Governor Tarullo, I have been changing my comments very much in real time, so let's see if I've kept up with everything. I support incorporating the more explicit forward-looking policy guidance as you suggested. This step is a small one. It may help markets better understand our policy framework and our intentions, and it may reduce uncertainty. But as Brian pointed out earlier, if you look in the modal forecast, markets don't expect us to raise rates until sometime in 2014, I think. And of course, this is a conditional commitment, as the proposed language makes clear. But I don't think that's actually enough. Based on what's going on in the economy and the forecast for inflation, I think we do need to go further, and I support extending the maturity of our Treasury holdings as described in paragraph 4 of alternative A. Research by my colleague Eric Swanson on Operation Twist shows that that policy indeed did reduce longer-term interest rates. His findings are completely consistent with the research that was done on the effects of the first stage

of the LSAP program in the current episode. So I think that it's a small step. I know it's not a panacea, but I do think it's a step that would help, and it would have relatively small downside risks. I also think we should be thinking about all the other options, and I agree with the idea of a two-day meeting in September. I think one option that I am also in favor of is lowering the target fed funds rate and IOER to zero, but I know that's an issue that's more complex. We'll have a good discussion of that at the next meeting. I also prefer, by the way, when I said alternative A, the language regarding the downside that I think President Evans also mentioned—"Moreover, downside risks to the economic outlook have increased"—which was in paragraph 2. I think that's actually an important piece of the language that's missing in alternative B.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, I'm sympathetic to your concern. We're expressing, as you said, a general darkening of mood and expectations. The issue is, what action do we take? And there is a proposal on the table by Governor Yellen, which I'm not willing to support. I'm not willing to support it because it's asymmetric—that is, it talks about maintaining rates low as long as unemployment exceeds 7½ percent and a medium-term outlook for inflation remains subdued, undefined. We have a lot of work to do to define our comfort level here. I'm sympathetic to President Evans, but I think the asymmetry of it will create problems further down the path.

I worry about paragraph 1 because there's a lot that's unspoken in here. I would like to actually add a sentence—which I don't think I'll get, but I'm going to state it anyway. That is, after we talk about how housing has flattened out, investment in nonresidential structures is still weak, and the housing sector remains depressed, which is true, I would like to add the following

language: “Uncertainty regarding non-monetary-policy initiatives appears to have added to the hesitancy of businesses’ willingness to expand payrolls, utilize existing capital, and add physical capacity, although business investment in productivity-enhancing equipment and software continues to expand.” I would further insert that “uncertainty has been compounded by financial developments in Europe.” For some reason, we’re not mentioning this. I think these are significant factors.

I think there are risks to us going further than we’ve already gone. I understand the desire to act, but I think we have to think through those actions, and presently I don’t think we have a consensus at the table that we should do more. I am not willing to vote in favor of doing more. I think the proposal that Governor Yellen has put forward, which I’m somewhat sympathetic to, is too asymmetric. I take President Bullard’s point seriously—that is, that pushing things out to 2013 looks too politically convenient—and I just think we don’t have enough information at this juncture. I would endorse alternative B with the enhancement or complication that I’ve added, and I’m not willing to support much more than that. I think we have to be extremely careful here. We need to conduct monetary policy in the most deliberate way, not a reactionary way. We have had a significant market selloff, which we talked about earlier with Brian. In terms of valuation levels, we could have a great deal further to go. I think the tool kit that we have in place has limited potential because we’ve exhausted much of what we have still in our pocket. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. Of necessity more than preference, I am going to have to follow Governor Tarullo’s admonition to be nimble in my remarks, and I’ll do my best to do that at the cost of being even less articulate than usual. I am

willing to support alternative B as written and circulated. I do not see myself being able to support any of the emendations except the one that President Plosser offered for paragraph 4.

Let me talk about my thinking in that regard. That thinking is framed by the following issue, and I'm often asked this: What's the most difficult thing for you in terms of formulating policy relative to being an academic and thinking about policy? I think the difference is, for an academic, it's a relatively sterile exercise where you write down models and you formulate what you're supposed to do, and you come up with some long-term framework that you're supposed to use. And I think as a policymaker, quite rightly you're keeping track of short-run movements in data and responding to that because there are movements that take place that are outside the realm of your models, and you have to be moving your thinking accordingly. I think it's very challenging to keep hold of your longer-term framework while you're confronting the short-term data, and I'm a little concerned about the idea of changing our long-term framework in response to one week's worth of information. That's what I find troubling.

Let me talk about our longer-term framework, and I'll say some things that are going to be unabashedly hawkish, and I'm going to say some things that I think are fairly dovish. Let me talk about both of those. My thinking about our longer-term framework is that it's not just what we talk about among ourselves and how we understand the dual mandate or exactly what objective function gets used in the staff simulations. It's about what we communicate to the public and to our overseers, the Congress of the United States. My understanding of what that communication is, and we reiterated this last November, is that our commitment is to follow policies that will keep inflation at 2 percent or a bit under, and my thinking about further accommodation is shaped by that commitment.

What we're doing right now is using two forms of accommodation—low target interest rates and large-scale asset holdings. And the way the monetary policy rules work is—and the rules are designed to target a particular inflation rate, in this case 2 percent—that you tailor the level of accommodation to the level of underlying inflation and to the level of the output gap. We adopted our current level of accommodation in November 2010, when inflation was very low, 1 percent and decelerating, and unemployment was 9.8 percent. What's the situation now? Unemployment is lower than it was at that point. Core PCE inflation ran over 2 percent over the past six months. Other measures of medium-term inflationary pressures—for example, the median CPI and the trimmed-mean CPI calculated by the Cleveland Fed—have also run near 2 percent over that period. None of these changes in the economic position since November—the fall in unemployment and the rise in available measures of underlying inflation—argue in favor of easing given, as I said, that our longer-term framework that we effectively communicated was that we're trying to keep inflation at 2 percent or a bit under, with the idea that when pressures that are pushing up unemployment are coming along, they're also pushing down inflation, and as we act to move inflation back up to 2 percent, we're also acting to keep unemployment low. In fact, as I argued last time, I think the changes in the economic picture relative to November could well argue for reducing accommodation, but I think that that would really be ignoring the data. I think the data do lead one to think we could be facing a substantially wider output gap than even what's in the Tealbook. The way we would see that is, we should start to see downward pressures on inflation. I think this is the scenario, for example, of the New York Fed forecast. The New York Fed is forecasting 1.1 percent core inflation next year. I think one way to resolve this is to see more information about incoming data on core inflation and inflationary expectations. So I just don't see adopting more accommodation at this

stage as being consistent with our public commitment to keep inflation at 2 percent or a bit under.

The other way to put this is, if we want to follow policies consistent with our public commitments, we should be prepared to change what our communication of our longer-run framework is. I think this gets to some of the statements about lack of self-equilibration in the economy that Governor Raskin talked about and the staff talked about. So what's going on—or one story of what's going on—is that we've got deleveraging that's pushing down on consumption, and that means there aren't enough jobs. But if there was equilibrium, what should happen in the marketplace is that real interest rates should decline enough to generate enough consumption demand. Even though people don't want to eat as much now because of all the shocks that have hit them, if real interest rates fall enough, they're not going to want to save, and that will make them spend, and that will generate jobs, and that will generate employment. So what's interfering with this possibility? Well, one argument for what's interfering with this possibility is the zero lower bound—and that if you're at the zero lower bound, and you have a commitment, as we have, to keep inflation at 2 percent or a bit under, that means you've put a lower bound on the real interest rate. It can't go below negative 2 percent, which sounds really, really low, but maybe it needs to be lower. Making a public commitment to a higher target inflation rate—at least temporarily, as perhaps President Evans is advocating, or possibly permanently—would expand the range of possible outcomes you could attain. In particular, you could generate policies that would lead the real interest rate to fall below negative 2 percent. This is not something I would argue we should adopt today. It is something we should be thinking about and considering in response to what has been a long-term issue—that the economy is not recovering anywhere near as rapidly as we think it should, given conditions. We

should be thinking about whether or not that's because of the fact that we're not able to generate the real interest rates we need to get equilibrium.

One thing that I certainly agree with Governor Yellen on is that I think it would be great to have a two-day meeting in September, and one of the things I think we should be talking about at that point is the possibility of adopting a hard target inflation rate. I also don't rule out the possibility of changing our framework and our way of thinking given the data we have seen coming in. I think we should do that. What I object to is the notion that we should be doing that on the fly in response to a relatively short flow of information. I think it would be useful to have staff analysis of the costs and benefits of taking such a step. But failing that, given that we have a particular framework in place that we have communicated to the public, which is that we are interested in keeping inflation at 2 percent or a bit under, I don't see ourselves being able to adopt further accommodation. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Okay. I need to interject here. I guess it won't help to argue for my position any further. We have two dissents, is that right?

MR. FISHER. At this juncture.

CHAIRMAN BERNANKE. President Plosser, do you intend to dissent?

MR. PLOSSER. I'm inclined to, unless I hear something different.

CHAIRMAN BERNANKE. Okay. That's a very difficult position for me, obviously. Just to get a sense of the Committee's preferences so that I understand them, if we were to go back to alternative B as written with the forward-leaning language of the last paragraph, without the "financial conditions", how many dissents would I have? Any dissents? [Simultaneous speakers] I'm asking the question, just so I understand Committee preference.

MR. EVANS. No reference to mid-2013?



CHAIRMAN BERNANKE. That's right. Alternative B as written, except we take out the "financial conditions" language and we use the more forward-leaning paragraph 4.

MR. TARULLO. So no action at all?

CHAIRMAN BERNANKE. No action at all.

MR. EVANS. Mr. Chairman—

CHAIRMAN BERNANKE. I'm trying to get preferences.

MR. EVANS. I could not. I mean, it just seems clear that we would simply be postponing that very discussion until September, when we would have the very same outcome. And so I could not support that.

CHAIRMAN BERNANKE. Okay. Thank you. We have to get this done by 1:30. Yes?

MS. YELLEN. You might have other negative votes.

CHAIRMAN BERNANKE. Well, I'm going to stick with what I have. Let me just make a comment, and I understand your concerns, but I just need to say a couple of things. Number one, I'm perfectly willing to accept the argument that monetary policy is not the main tool, that this is not the main thing wrong with the economy, but it's our duty to do what we can, to be palliative, to help where we can, even if we can't solve fiscal, structural, and other problems. Number two, we have a mandate that says we should look at employment and inflation. We've had a very marked reduction in the outlook since the last meeting. Not responding in any way not only raises a question of whether we're following our mandate, but it also makes the markets uncertain because they don't know what we're doing. They can't follow our logic. Again, to put out a much darker statement and not to do anything strike me as being inconsistent. I believe this step is the most modest possible step we could take. It's completely conditional; it could be offset by any change in conditions. It could be offset by asset sales, if

necessary. We will elaborate going forward exactly what the conditionality is, and I will look forward to our discussions around the table. We will have a two-day meeting. I think I can accede to that point, at least, for September. [Laughter] And we will discuss all of this, and we'll continue with the subcommittee's discussions about the appropriate use of an inflation objective, which I do not believe is in any way inconsistent with this perspective, because what we're saying is, we believe that conditions will warrant, and "conditions warranting" means that we meet our objectives. I don't see any inconsistency of this with the inflation objective or that framework. Again, I feel that not signaling to the market and to the public that we are at least engaged in understanding that there is an issue here and that we're trying, at least in a palliative way, to respond to it, risks a real disconnect in terms of our communication, which I'm unfortunately not willing to accept. It would be very unpleasant to have three dissents, but I guess if that's where we end up, that's where we end up.

MR. PLOSSER. Mr. Chairman, I have a question.

CHAIRMAN BERNANKE. Yes.

MR. PLOSSER. Your proposal for my question about paragraph 4, the language—what was your—

CHAIRMAN BERNANKE. Well, when I was talking about going back to the old version, I was going to take the most aggressive language. But if you will not dissent, I will certainly listen to your suggestions.

MR. PLOSSER. I need to think about that a little bit.

CHAIRMAN BERNANKE. Okay. Let's go to President Pianaalto.

MS. PIANALTO. Thank you, Mr. Chairman. I support your recommendation of alternative B with the firmer "extended period" language from alternative A. As I noted during

our economic go-round, I revised down my outlook for economic growth, and I see further downside risks since our last meeting. In addition, I have greater confidence than I did at our last meeting that inflationary pressures are gradually subsiding. If we had a fed funds rate well above zero, given my outlook, I would be supporting a rate reduction. But instead, we have to contemplate using tools that are less well understood and are more difficult to explain to the public. Clearly, as many have said, and as you have just repeated, monetary policy can't solve all of our problems. But we should do what we can on the margin. So I am open to providing further accommodation using nontraditional tools. As others have said, I look forward to our meeting in September, where we can carefully weigh the costs and benefits of the options that were laid out in the staff memo. In my view, Mr. Chairman, you have clearly laid out the reasons for taking some actions today. I also agree with your comments regarding your desire to control the QE3 speculations.

As others have noted, I have a strong preference for our policy responses to be contingent on evolving economic conditions rather than a date specific; however, I think it's going to be difficult in the short time we have left today to come up with that language and those measures, although I like the language that Governor Yellen has suggested. In fact, if the FOMC was currently publishing the fed funds rate path that underlies our current economic projections, then the public would already know that we don't expect to raise the fed funds rate until about mid-2013, that we expect at that time the unemployment rate is going to be at 7½ percent, and that we anticipate having subdued inflation until mid-2013. I would encourage you, Mr. Chairman, to use the Jackson Hole speech to elaborate on some of these economic conditions, and I also think it would be helpful for you to articulate how the firmer "extended period" language, and perhaps

some of the other policy options, would be expected to affect our economic outlook. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I think we find ourselves in uncharted waters, and that's a phrase we've been using for four years now. But we've again veered farther away from the charts we have. I welcomed Governor Tarullo's opening of this round, which I interpret as an appeal for humility and openness to question how we know what we think we know about things. My question, as you know, is whether monetary policy can have a big effect on economic growth right now. I think the key question for us is, why is growth so low? And I'd just remind you that our traditional approach to this—loss functions like the one President Evans referenced—rests on a dichotomy between the determinants of longer-run trend growth and fluctuations around that, where technologies and preferences and population growth are viewed to influence the former, but policy is the tool that moves around things in the meantime. And I don't think we really know that that can never change. The 20th-century trend growth in the United States is remarkably constant, but it's also a fact that many other advanced countries with access to the same technology as us, and presumably the same types of human preferences involved, have converged to growth paths that are markedly lower than that in the second half of the 20th century. And it's not obvious to me that we're not capable of shifting from the path we were on in the 20th century to one more like Europe's, and it's not obvious they can't shift up. Given that, I think we should be circumspect about taking measures of the output gap, measures of the unemployment gap, as measures of how much further policy has to go. My sense of things is that further monetary stimulus at this point is unlikely to change real outcomes very much at all. If you look back at QE2, we didn't have much of an effect on economic growth. The effect

we had was temporary, and we got a more sustained increase in inflation. This is the classic prediction of what happens after a monetary policy impulse. I think that in hindsight August is likely to be a Romer date. You look at the impulse response after that, and it looks like the classic thing: temporary effect on real activity, sustained effect on inflation.

So I think we should be sitting pat. I think we should avoid encouraging people to look to us, to look to monetary policy, to fix economic growth problems. And so I favor alternative B. And I guess a lot of options have been put on the table. I strongly oppose putting in numbers for unemployment. I share President Bullard's discomfort with putting in a calendar date as well, just for the reasons he said. I don't think we can be sure that we're not in the situation in which Europe found itself in the '80s, and that we're not going to see unemployment well above 8 percent for a decade or more. And it's through no fault of monetary policy. So I don't want to hang our hat on unemployment. I don't think we should. That concludes my remarks. Oh, and about the two-day meeting, can I get back to you when I see my BlackBerry?  
[Laughter]

CHAIRMAN BERNANKE. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. Our position is incredibly uncomfortable. Many around the table have pointed out that the factors contributing to the disappointing results are not monetary in nature, and that it's not clear that monetary policy can cure the ills. Well, it might not be our fault, and it might not be our job, and we might not be in the best position to act, but I still see our responsibility as taking whatever action we can that we believe will result in the best outcome, regardless of how it fits with our own preferences or comfort level. But we have to weigh carefully the costs and benefits of our options. I don't see the change in our guidance as high risk. It communicates our best estimate of the future outcomes. And even

though the statement might not be different from market expectations today, it could keep markets from prematurely anticipating our exit if this uneven recovery results in a spurt of good data as a result of those same temporary factors. And I do see the rewards of this action as not raising expectations for QE3. As to the clarification proposed by Governor Yellen, I could support it but would prefer to take more time to think about it. I do support a two-day meeting and perhaps an intermeeting conference to give us time to assess the relative costs and benefits of all of our options. As I said in the economic go-round, I believe our remaining ammunition is limited and therefore must be carefully aimed. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you very much. President Bullard was first, I think.

MR. BULLARD. I just wanted to make a small suggestion in an effort to try to round up some consensus. Instead of “2013,” could we change “an extended period” to “a period substantially longer than previously envisioned”? [Laughter]

CHAIRMAN BERNANKE. I don’t know that that helps, really. Tell me if it does.  
President Kocherlakota.

MR. KOCHERLAKOTA. Yes, I’m not sure that helps, unfortunately. I was just going to point out that while it is true that using “extended period until 2013” accords pretty much with our estimates of what our mean would be—or actually, I think, it’s even to the left of that—the reason it’s useful policy from one perspective—why it’s accommodative—is that you’re shearing off the possibility of raising rates or reversing accommodation before that. We can’t both argue that it’s not going to have any effect and view it as increasing accommodation. That’s my only point.

CHAIRMAN BERNANKE. No, that’s not true because, first of all, it is conditional. It’s absolutely conditional. But even if it’s not an ironclad commitment, it’s communicating an

expectation and to the extent that there's a misunderstanding or a disagreement it can be effective. President Fisher.

MR. FISHER. I'm sorry, because we do have two more to go, and then we should probably have a discussion, but I'd be extremely cautious on "2013," Mr. Chairman. It just looks so politically convenient. I really think that through your good efforts of communication, through the actions taken by this Committee, we've in essence, removed ourselves from the heat of the political debate. I think we're less suspect in the eyes of our critics than we have been. And I think the attention is rightly focused on getting this fiscal situation under control. I might have different prescriptions than what has been suggested, but the focus is back on the Congress, with the assistance of the executive. The "2013" just looks too politically convenient, and I don't want to fall back into people being suspicious about the way we conduct our business. So I just want to plead on that front. I think it's a mistake. I think it would then allow those who are trying to squirm out of their duties of actually getting their act together on fiscal policy—whatever that act is—to put the finger back on us. And it's unfortunately after an election, and it's a declaration before we know what the outcome is of what's likely to happen on the fiscal side, which is critical here. So I wanted to plead that we do not adopt that specific date, given that it is ultra-inconvenient and given that we have worked very hard—and you have taken special personal risk in terms of your communications—to lower the temper and suspicion about monetary policy. I think this would raise the suspicion and make us look like we're way too politically acquiescent, whatever our personal politics may be.

MR. TARULLO. President Fisher, would you be happier with "2014"?

MR. FISHER. No.

PARTICIPANT. "End of 2012," then.

MR. FISHER. It depends on the conditions. But look, again, we have restored our integrity to a great degree, and I don't want to put a dent in it.

CHAIRMAN BERNANKE. Some may interpret it that way, I suppose. But that's the appropriate date given our information.

MR. FISHER. Right now you have "extended period." "Extended period" is indefinite.

VICE CHAIRMAN DUDLEY. It's two or three meetings according to some.

[Simultaneous speakers]

MR. EVANS. We really should let everybody else have an opportunity.

VICE CHAIRMAN DUDLEY. We have a couple more people who'd like to speak.

CHAIRMAN BERNANKE. Could I turn to Governor Tarullo, please?

MR. TARULLO. Thank you, Mr. Chairman. I want to begin, again, by invoking the legal authority under which we act every time we gather around this table. And that legal authority gives us a dual mandate. One, it doesn't say we are supposed to promote price stability and maximum employment so long as the rest of the government does what we'd like them to be doing. And it does say that we have to promote both price stability and maximum employment, and you cannot read one of those phrases out. How one balances those has obviously been a centerpiece of U.S. monetary policy at least since the late '70s and probably before, but it is our responsibility. Point two, if what I said earlier about this being a possible inflection point is correct, I'm actually a bit concerned that simply changing the understanding of "extended period" to what was already anticipated is not going to do much. And Mr. Chairman, I do agree with Charlie Plosser that we're not going to dispense with speculation about QE3 by either making or not making that change in the language.



I've been listening to everybody and trying to figure out how we could maximize the support for a particular statement here, and I'm not at all sure that I've got the way to do it. But rather than state further my views on where the economy is and what monetary policy would do, let me see if I can at least offer two suggestions that might help. First, I wonder whether there is a way to add a qualifying or descriptive phrase that reinforces the sense that this date already accords with our expectations for when we'd be converging on an appropriate moment to either begin to remove or no longer grant accommodation, and thereby make it more obviously contingent and more obviously predictive. I suggest this, Richard, mindful more of Jim's points about setting a date out there arbitrarily, no matter what it is, because I'm not as concerned about the political implications of saying "2013." Second, in trying to respond to, I think, some of Charlie Plosser's concerns and some that I heard from other people, I wonder whether inserting an additional sentence in paragraph 4 might help give the public a more accurate sense of what we did today, and thus tamp down a little bit of unwarranted speculation. We might think about adding as a first sentence that "the Committee discussed the range of policy tools available to"—whether it's "promote a stronger pace of economic recovery in a context of price stability" or "best foster maximum employment and price stability"—and then say, "It will continue to assess the economic outlook in light of incoming information and is prepared to employ these tools as appropriate." The purpose for inserting that first sentence is to make clear (a) that a lot of things other than QE3 were discussed and (b) that precisely because there's a range of things under discussion, action may be forthcoming, but there is by no means a commitment to do so. I think the purpose is also to just accurately reflect to the world before the minutes come out, which is in three weeks, that a lot of what we did today was to talk about what we might do and why we might do it. I would hope that that could address the concerns of people who don't want us to

seem too passive, while not going over the line with the concerns of people who think that we're not ready or that we don't know enough to take some more tangible step right now. Having said that, I'm going to withhold a judgment on anything because I'm not sure what's on the table right now. But I trust, Mr. Chairman, you're going to try to come back, distill everything, and give us a concrete proposal on which you can again solicit people's opinions.

CHAIRMAN BERNANKE. Well, I'm still with the "2013," unless I have a suggestion that will accommodate—

MR. FISHER. That's an interesting suggestion.

MR. TARULLO. Okay. I'm not sure what the right language is to try that.

MS. DUKE. What if it said, "The Committee currently projects," rather than "anticipates"?

MR. TARULLO. "Projects"?

MS. DUKE. Yes.

MR. TARULLO. Ask the guys at the end of the table.

VICE CHAIRMAN DUDLEY. I think people are very much overstating the degree of commitment in that language. It says "currently anticipates that these conditions are likely to warrant." It's qualified all over the place. I don't understand why people view this as some binding commitment. It's not a binding commitment. There are all sorts of escape clauses. I don't understand why people view this language as so binding that they'd be willing to dissent. This is the Committee. The Committee has a forecast. Now, people may disagree with the forecast, but is it unreasonable for the Committee to have a view, that the Committee, in its totality, today anticipates that this is what is likely? That's not binding.

MR. TARULLO. Bill, maybe that's the point. I think this is what Betsy was trying to get at. If the sense of the forecast, and the forecast-dependent nature of this statement, were a bit more explicit, that might give a little bit of comfort to those who worry that a date is being placed out there absolutely.

CHAIRMAN BERNANKE. "The Committee currently projects that economic conditions"? Would that help anybody?

VICE CHAIRMAN DUDLEY. If the projections change, then the date could change.

MR. EVANS. Were we working on Governor Yellen's language?

CHAIRMAN BERNANKE. No. [Simultaneous speakers]

VICE CHAIRMAN DUDLEY. I think it's off the table for now.

MR. BULLARD. First of all, I agree very much with what Governor Tarullo said about saying that we had discussed a lot of options. That's very helpful, I think. The other thing is to get rid of the "2013," how about something very simple? Instead of "for an extended period"—"for a very substantial period"?

CHAIRMAN BERNANKE. No, that doesn't change anything.

MR. BULLARD. I think if you move off the "extended period" language and switch it to something else, you'll get a lot of market attention, and they will see that as a further commitment.

CHAIRMAN BERNANKE. Does that help anybody?

MS. DUKE. No

CHAIRMAN BERNANKE. No.

MR. FISHER. I'm confused as to where we are right now, Mr. Chairman. Maybe I'll let Governor Raskin finish, but I think Governor Tarullo's suggestion is worth thinking about.

CHAIRMAN BERNANKE. I only heard one suggestion—the thing about the range of tools—which is useful but doesn't address the controversy here.

MR. TARULLO. No, Betsy and I together, I think, are trying to address that by changing the words to make it clearer that we've picked the date because of our current projections. Maybe that's what I'm suggesting.

MS. DUKE. Yes.

CHAIRMAN BERNANKE. How about this: “Based on current projections, the Committee anticipates that economic conditions . . .”? Is that all right?

VICE CHAIRMAN DUDLEY. Yes.

MR. EVANS. I'm sorry, I don't know what we're talking about. This is critical to me.

CHAIRMAN BERNANKE. We're going to the sentence now—about the “2013.”

MR. EVANS. I'm sorry, we're on alternative B?

CHAIRMAN BERNANKE. Paragraph 3 of alternative A, which says now, “The Committee currently anticipates that economic conditions . . .”, and would say “Based on current projections, the Committee anticipates that economic conditions . . .”

MR. EVANS. But still “through mid-2013”? It's the date that matters.

CHAIRMAN BERNANKE. Yes. Will that help? At all?

MR. KOCHERLAKOTA. I'll have to think about it more.

MR. FISHER. Me, too.

CHAIRMAN BERNANKE. All right, you have five minutes. [Laughter] All right. Governor Raskin, please.

MS. RASKIN. Thank you, Mr. Chairman. Now, before we take alternative B off the table with the statement on forward guidance, I want to say a couple of things in support of it.

First of all, I think it's appropriately forceful but accurate in its characterization of the incoming data. It now slightly de-emphasizes the role of temporary factors in the first-half slowdown. I think the slow economic growth in the first half of this year extends beyond the factors that we've labeled as transitory. Weaker growth in disposable personal income, to me, signals a protracted slowdown in consumer spending, particularly given the persistently low level of consumer confidence. Nonetheless, I think that the pickup in inflation over the first half of this year is a transitory phenomenon, and I think that inflation will be subdued over the medium term. In fact, it appears to me as if a moderation in inflation is already under way, especially given that energy prices have decreased significantly from their peaks during the spring. And as we've heard today, both survey- and market-based measures of longer-term inflation expectations have changed little, on balance, over the course of the year. There's going to continue to be considerable slack in labor markets over coming quarters, which will continue to exert significant restraint on wages and prices.

Now, the statement of forward guidance. Like you, Mr. Chairman, I think that alternative B without the statement of forward guidance runs the risk of communicating that the Committee is unable or unwilling to merely clarify its anticipation of responding to this protracted slowdown. Because I think that an important source of the weakness in the economy is that households and businesses don't have confidence that things will get better, I have reservations about a statement that leaves the impression that we cannot or will not clarify our anticipation. If we choose not to clarify our anticipation, as in alternative B without any additional language, I think we need to explain why more clearly. Otherwise, we run the risk of creating confusion.

I recognize that one problem is that not everybody on this Committee agrees on the diagnosis or the treatment plan for the ailing economy, but we can't let our lack of consensus cause us to confuse the public. At this point, we run the risk of giving the impression either that we can't do anything or that we won't do anything, and that we will not clarify our anticipation, which I fear would exacerbate the lack of confidence in the economy. So I think we should consider sending a stronger signal with our language about how long we are prepared to keep rates low. I'd be very supportive of clarifying our forward guidance and believe that this would be a significant step, not in terms of monetary accommodation, but in terms of providing greater transparency about our overall strategy and about the policy path that we see as most appropriate for fostering our dual mandate. So I think it would be helpful to include something. And here, again, this language that was circulated—to me, all that it does is really describe with more specificity the economic conditions that are likely to warrant the continuation of an exceptionally low funds rate. It also provides some loose indication of the time horizon over which we expect those conditions to prevail. In sum, even if I thought that not clarifying our anticipation would most likely end with us successfully fulfilling the dual mandate in the future, I find it prudent to clarify now, not because the language is going to have a big impact, but because the fragile state of the economy at the moment makes it very vulnerable to any new negative shocks or the worsening of ongoing shocks, and clarifying our anticipation may help on the margin.

CHAIRMAN BERNANKE. Thank you. All right. Well, let me get a proposal—sorry.  
Vice Chairman.

VICE CHAIRMAN DUDLEY. Thirty seconds. First, we have to do what we can do. I completely agree with Governor Tarullo. This notion that “It’s someone else’s fault, so that means we get to abdicate our responsibility”—that’s just ridiculous in my opinion. Second, I

think that what you proposed is the absolute minimum of what we need to do today. I'd be prepared to do more, but that's the absolute minimum. And third, I think people are dramatically overstating the degree of commitment in saying that "we anticipate that something is likely based on our current projections." It just doesn't bind us in any meaningful way. All it does is provide more clarity to the market and replace something that today is completely empty. The "extended period" language today is absolutely empty.

MR. EVANS. Come on, you can't say empty.

VICE CHAIRMAN DUDLEY. Well, it's empty in the sense that it means that we're going two or three meetings out, that's it. So the "extended period" language today doesn't really add very much. This actually provides a lot more than that, so I completely support you.

CHAIRMAN BERNANKE. Thank you. All right. Let me—Michelle tells us we need to get this done as soon as possible.

MR. FISHER. Let's get it right.

MR. KOCHERLAKOTA. Could I clarify one thing, Mr. Chairman?

CHAIRMAN BERNANKE. Yes, of course.

MR. KOCHERLAKOTA. I would not be able to support the alternative, even as rewritten with Governor Duke's proposed change of language.

MR. FISHER. Which is?

CHAIRMAN BERNANKE. "Based on current projections"? Can you conceive of any language that would help you?

MR. KOCHERLAKOTA. Not at this time, no.

CHAIRMAN BERNANKE. All right. So what I'm proposing is alternative B. In the first paragraph, we've struck the sentence—

MR. EVANS. Mr. Chairman, can I just say that a number of people have preferred alternative A? I mean, if you're going to take three dissents—

CHAIRMAN BERNANKE. No, alternative A involves the lengthening of the portfolio, and I'm not going to introduce that discussion at this time. I'm sorry, but I promise we'll do that at the two-day meeting, which everyone has agreed to.

So in alternative B, we're scratching the "financial conditions" sentence from the first paragraph. The second paragraph is unchanged. The third paragraph—let me ask President Plosser now. Is there anything we can do for you in the last paragraph?

MR. PLOSSER. I prefer the old language for paragraph 4, but I'm not sure doing that is sufficient offset to the "2013" language.

CHAIRMAN BERNANKE. What about the language in paragraph 3, where it says now, "The Committee continues to anticipate," we'd say, "Based on its current projections, the Committee anticipates that economic conditions . . ." Does that help?

MR. PLOSSER. I'm sorry to be slow here, but this very difficult. Putting that, along with the change in paragraph 4, would be an improvement.

CHAIRMAN BERNANKE. A sufficient improvement?

MR. PLOSSER. That's what I'm struggling with. I'm not sure it would be, Mr. Chairman.

CHAIRMAN BERNANKE. Okay.

MR. FISHER. Mr. Chairman, could you read the full sentence for me, please? I'm sorry.

CHAIRMAN BERNANKE. With the proposed change?

MR. FISHER. Yes, sir.



CHAIRMAN BERNANKE. It would be, “Based on its current projections, the Committee anticipates that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant exceptionally low levels for the federal funds rate at least through mid-2013.” “At least two years.” How about “for at least two years”?

MR. FISHER. Mr. Chairman, again, I think we have labored mightily to make clear that we are as politically independent as possible.

CHAIRMAN BERNANKE. It’s not political.

MR. FISHER. But sir, it may well be interpreted as that by our critics. We have mitigated our critics substantially. Why don’t we just say “for a substantial period”? I mean, we’re putting a date on here.

CHAIRMAN BERNANKE. “Extended,” “substantial”—

MR. FISHER. The date happens to be right after the election—I cannot support that.

CHAIRMAN BERNANKE. All right. Fine. President Rosengren.

MR. ROSENGREN. If you’re going to take three dissents, then I think we should go to the language of alternative A and take out paragraph 4, because I think there was enough support for that. So if they’re going to dissent anyway, I think we should have much stronger language, because I think that was the consensus of everybody else other than the people who are dissenting. If they really feel so strongly about that, I think we should go to alternative A, take out paragraph 4, and that would characterize how everybody else is viewing the economy.

CHAIRMAN BERNANKE. Are there any objections?

MR. ENGLISH. Sorry, that’s alternative A, paragraphs 1 and 2?

CHAIRMAN BERNANKE. Alternative A—

MR. ROSENGREN. But take out the—

CHAIRMAN BERNANKE. Take out “financial conditions” in the first paragraph.

MR. ENGLISH. But take alternative A, paragraphs 1 and 2?

MR. ROSENGREN. 1, 2, and 3.

CHAIRMAN BERNANKE. And 3, which is identical now. Get rid of 4 completely.

MR. ENGLISH. You can’t take paragraph 3 of alternative A because there has to be the reinvestment.

MR. LUECKE. That’s two sentences of paragraph 3 in alternative B.

CHAIRMAN BERNANKE. All right. Paragraphs 1, 2, and 3 of A—but just add the sentence “The Committee also will maintain . . .”—and then paragraph 4 of A.

MS. YELLEN. So we’re putting in the reinvestment—“maintain its existing policy of reinvesting principal”?

CHAIRMAN BERNANKE. Yes. So it’s alternative A as written, eliminate the “financial conditions” sentence, and insert at the end of paragraph 3 the material on reinvestment.

MS. DUKE. Do you have Dan’s change to paragraph 4?

CHAIRMAN BERNANKE. Paragraph 4 is as in alternative A, which is exactly what we had. What did you want to say, Governor?

MR. TARULLO. I think somebody’s got it. [Simultaneous speakers]

MS. YELLEN. This is Dan’s proposal for 4.

CHAIRMAN BERNANKE. The beginning of the last paragraph is, “The Committee discussed the range of policy tools available to promote a stronger economic recovery in a

context of price stability. It will continue to assess the economic outlook in light of incoming information and is prepared to employ these tools as appropriate.”

MR. WILCOX. Do you want the last sentence from paragraph 3 in B—about the Committee being ready to “regularly review the size and composition”?

CHAIRMAN BERNANKE. Yes, exactly what’s in B. The last two sentences in B. Dan, I don’t know. Is it worth the effort at this juncture?

MR. TARULLO. Unless there’s an objection—

CHAIRMAN BERNANKE. Okay.

MR. TARULLO. I think that first sentence really does help us a little bit with that “range of policy tools.”

CHAIRMAN BERNANKE. All right. Let’s go through it now. So paragraphs 1 and 2 from alternative A—and 3 from A.

MR. ENGLISH. Paragraph 1 in A less the “financial” sentence.

CHAIRMAN BERNANKE. Paragraph 1 in A less the “financial” sentence; then paragraphs 2 and 3 from A and add to paragraph 3 the last two sentences—“The Committee also will maintain its existing policy of reinvesting principal payments from its securities holdings. The Committee will regularly review the size and composition of its securities holdings and is prepared to adjust those holdings as appropriate.” And then add the new 4: “The Committee discussed the range of policy tools available to promote a stronger economic recovery in a context of price stability. It will continue to assess the economic outlook in light of incoming information and is prepared to employ these tools as appropriate.” [Simultaneous speakers]

VICE CHAIRMAN DUDLEY. I’m a little concerned about whether the market will jump to the view that we’re going to do QE3 because you have this language: “The Committee

will regularly review the size and composition of its securities holdings.” I just think you might want to be aware of that potential.

CHAIRMAN BERNANKE. All right. We’ll use communication to downplay the QE3. All right. Any further comments? Would you please read the current statement? And I apologize, everyone, for the rush.

MR. LUECKE. Paragraph 1 in A less the “financial;” paragraph 2 from A, explicitly as is; paragraph.3 from A plus the last two sentences of paragraph 3 in B; and paragraph 5 from A, with the new language, which I don’t have written down in full.

CHAIRMAN BERNANKE. Okay.

VICE CHAIRMAN DUDLEY. Let’s get the new language read, if we could.

CHAIRMAN BERNANKE. Michelle, are you taking this down?

MS. SMITH. Yes. It would help if you would read me the last paragraph of A.

CHAIRMAN BERNANKE. Here it is: “The Committee”—capital C—“discussed the range of policy tools available to promote a stronger economic recovery in a context of price stability. It will continue to assess the economic outlook in light of incoming information and is prepared to employ these tools as appropriate.” Have you got it?

MS. SMITH. Yes.

CHAIRMAN BERNANKE. Okay.

MR. SACK. The last sentence of 3 seems very repetitive, doesn’t it?

MR. TARULLO. This is Bill’s concern again?

CHAIRMAN BERNANKE. The last sentence—

MR. SACK. “The Committee will regularly review the size and composition of its securities holdings and is prepared to adjust those holdings as appropriate.” Isn’t that one of the tools that’s covered now in paragraph 4?

MR. FISHER. It would be nice to see the whole thing so that we know what we’re voting on.

CHAIRMAN BERNANKE. No, let’s just leave it.

VICE CHAIRMAN DUDLEY. That’s been standard. That was in there last time.

CHAIRMAN BERNANKE. That’s standard. Let’s leave it. Okay. Any further questions or uncertainties? Are you okay? Let’s call the roll.

MR. LUECKE. Okay. This vote will be on the language that was just described, in addition to the directive that is on page 8 of the packet that was handed out.

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

CHAIRMAN BERNANKE. Okay. Thank you. Lunch is available. Let’s take 20 minutes to get lunch, and then Linda Robertson will give a report to those who are still here. Our next meeting is September 20. Thank you.

END OF MEETING