

**Meeting of the Federal Open Market Committee on  
August 10, 2010**

A joint meeting of the Federal Open Market Committee and the Board of Governors of the Federal Reserve System was held in the offices of the Board of Governors in Washington, D.C., on Tuesday, August 10, 2010, at 8:00 a.m. Those present were the following:

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

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

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

William B. English, Secretary and Economist  
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  
Nathan Sheets, Economist

James A. Clouse, Thomas A. Connors, Steven B. Kamin, Lawrence Slifman, Mark S. Sniderman, and David W. Wilcox, Associate Economists

Brian Sack, Manager, System Open Market Account

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

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

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

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

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

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

Seth B. Carpenter, Senior Associate Director, Division of Monetary Affairs, Board of Governors; David Reifschneider and William Wascher, Senior Associate Directors, Division of Research and Statistics, Board of Governors

Stephen A. Meyer, Senior Adviser, Division of Monetary Affairs, Board of Governors; Stephen D. Oliner, Senior Adviser, Division of Research and Statistics, Board of Governors

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

Eric M. Engen, Assistant Director, Division of Research and Statistics, Board of Governors

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

John C. Driscoll and Jennifer E. Roush, Senior Economists, Division of Monetary Affairs, Board of Governors

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

Kimberley E. Braun, Records Project Manager, 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

Loretta J. Mester and Robert H. Rasche, Executive Vice Presidents, Federal Reserve Banks of Philadelphia and St. Louis, respectively

David Altig, Ron Feldman, Craig S. Hakkio, Glenn D. Rudebusch, Daniel G. Sullivan, Geoff Tootell, Senior Vice Presidents, Federal Reserve Banks of Atlanta, Minneapolis, Kansas City, San Francisco, Chicago, and Boston, respectively

Linda Goldberg, Vice President, Federal Reserve Bank of New York

Annmarie S. Rowe-Straker, Assistant Vice President, Federal Reserve Bank of New York

Pia Orrenius, Research Officer, Federal Reserve Bank of Dallas

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

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

MR. KOHN. So moved.

CHAIRMAN BERNANKE. Thank you. I'm sure most of you know that we tried very hard to get our additional Board members confirmed in time for this meeting. Unfortunately, it was not to be. We hope that, when the Senate returns in September, we will have action; but, for today, I have once again asked Governor Kohn to lend us his wisdom. This is absolutely, positively [laughter] Don's last meeting, and we thank you, Don, for once again helping us out. Don will, in fact, without any contingency, be leaving on September 1. And we thank you again for your service and for helping us make these difficult decisions.

September 1 is also a sad day, because it will be the last day for our colleague, Brian Madigan. Brian is very modest about being recognized, so it took a direct order from the Chairman to get him even to come to the beginning of this meeting. [Laughter] Brian has attended 145 scheduled FOMC meetings, and he became both the FOMC Secretary and the head of the Monetary Affairs Division in August of 2007—I'm not ascribing any causality there. Brian has made enormous contributions, as you all recognize. He has given us about six or seven years' worth of work in the last three years, and his dedication and his insight have been extraordinarily helpful. To honor his service, we have put together a little gift for Brian, signed dollar bills. No one has ever explained to me why signing these bills is legal, by the way. [Laughter]. Brian, thank you for all you have done for the Federal Reserve. [Extended applause]. Do you want to say something, Brian?

MR. MADIGAN. Thank you very much, Mr. Chairman. It has been a privilege to serve on the Board staff and on the Committee staff for a number of years, especially for the past two years when the Federal Reserve has played such a critical role. I want to thank you again for all the support and help you have given me and, again, for the privilege of being able to serve the Committee. Thanks again.

CHAIRMAN BERNANKE. Thank you, Brian. [Applause] Well, on that sad note, let me just remind everybody that today is a one-day meeting, so we'll need to be especially efficient to accomplish everything on our agenda.

Before I turn to the financial briefing, Vice Chairman Dudley wants to introduce someone.

VICE CHAIRMAN DUDLEY. I would like to introduce Annmarie Rowe-Straker, who is sitting next to Brian Sack. Annmarie is joining us from the Markets Group at the New York Fed. Welcome, Annmarie, to your first meeting.

CHAIRMAN BERNANKE. Welcome. Let's begin, then, with our first item, which is a briefing on financial developments, and I'll turn to Brian Sack.

MR. SACK.<sup>1</sup> Thank you, Mr. Chairman. Concerns about the outlook for economic growth led market participants to lower their expected path of short-term interest rates sharply and to begin discussing other steps the FOMC could take to increase the degree of policy accommodation.

As shown in the upper left panel of your first exhibit, the expected path of the federal funds rate derived from futures quotes has fallen dramatically over the past two intermeeting periods, and the FOMC is now expected to keep the federal funds rate near its current target range until late next year. Similarly, the Desk's survey of primary dealers, shown to the right, indicated that the most likely timing of the first policy tightening has shifted back notably, namely, to the latter part of 2011.

In addition, market participants have increasingly focused on four possible steps that the FOMC could take to make its policy setting more accommodative: reduce the interest rate on excess reserves (the IOER rate), modify the policy language to

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

convey more strongly the FOMC's intention to maintain a very low federal funds rate for a long period, reinvest the principal repayments from the System's holdings of agency debt and mortgage-backed securities (MBS), or expand the balance sheet by purchasing even larger amounts of those securities. As indicated in the middle left panel, the median response to the Desk survey placed about one-third probability on the FOMC adopting stronger policy language or reinvesting maturing proceeds by the end of the year, with smaller probabilities assigned to a cut in the IOER rate or an expansion of the balance sheet. It should be noted that these readings were taken before the more extensive discussion of these options in the financial press over the past week, and it is likely that the perceived odds have risen since our survey.

The recent economic data have been a key driver of this shift in sentiment and have led market participants to mark down their outlook for GDP growth and to reassess the distribution of risks around their forecasts. However, FOMC communications also played an important role, as they conveyed a shift in the Committee's economic outlook and at least opened the door to more aggressive policy actions.

The revision to policy expectations strongly influenced Treasury yields, as shown in the middle right panel. The two-year yield fell to around 50 basis points—the lowest level on record. Across the curve, Treasury coupon yields declined 10 to 50 basis points, with the most pronounced declines at intermediate maturities.

The fall in longer-term Treasury yields was driven by both the shift in monetary policy prospects and a decline in the term premium. As shown in the bottom left panel, one measure of the term premium embedded in the 10-year Treasury yield has declined to around 25 basis points. Expectations that the FOMC could begin purchasing Treasury securities as part of a broader reinvestment strategy may have contributed to this decline in recent weeks.

As shown in the bottom right panel, the decline in nominal yields has been accompanied by a fall in breakeven inflation rates. Benign incoming data on inflation and heightened concerns about the economic recovery apparently led to a modest decline in expected inflation. Market participants have also begun to discuss the risk of deflation to a greater degree than in the past. However, as best as we can tell, they still seem to view a prolonged deflation as a fairly remote possibility, holding the Chairman to his 2002 promise to make sure "it" doesn't happen here.

Despite ongoing concerns about the economic growth outlook, investors became slightly more comfortable holding risky assets over the intermeeting period. As shown in the upper left panel of exhibit 2, U.S. equity prices recovered in recent weeks to leave them slightly higher than they were at the time of the last meeting. Similarly, corporate bond yield spreads narrowed slightly, on balance.

These assets were supported by second-quarter earnings reports that were generally stronger than expected. However, a more important factor boosting these asset prices was the sense among investors that the chances of a sharp deterioration of

financial market conditions had diminished with the passage of some key risk events, including the European bank stress tests. Consistent with this interpretation, the implied volatility of U.S. equity prices over the near term declined over the intermeeting period, as shown in the upper right panel.

Investors did not view the European bank stress tests as particularly stringent, but they did place value on the additional information about the firms' exposures that was released as a result of this process. Moreover, other factors likely contributed to the improved sentiment towards Europe, including progress by some countries on fiscal adjustment, successful auctions of sovereign debt, the smooth expiration of the European Central Bank's (ECB's) one-year liquidity operation, and stronger-than-expected data on European growth. Nathan Sheets will discuss the outcome from the stress tests and these other developments in more detail in his briefing.

The more positive view of European financial institutions is reflected in the CDS spreads for those firms, shown in the middle left panel, which have narrowed notably in recent weeks. It has also provided some relief from the strains that had been observed in dollar funding markets, as indicated by the decline in LIBOR-OIS spreads, shown to the right.

The swing in investors' views about Europe has also shown through to the exchange rate. As indicated in the bottom left panel, the dollar has depreciated sharply against the euro in recent weeks as sentiment about the European situation improved, reversing much of the appreciation experienced in the second quarter. But the dollar has also weakened against a broader set of currencies, suggesting that the recent depreciation has been driven not only by developments in Europe but also by the heightened concerns about U.S. growth prospects and the associated decline in U.S. yields.

Before leaving this exhibit, I want to make a few points about financial stability. While European banks and governments seem to have received a reprieve, it is worth noting that important risks remain. Foreign financial firms remain heavily dependent on short-term dollar-denominated funding markets, and they also have large amounts of unsecured, longer-term debt coming due over the next several years. Moreover, governments in the euro area still have difficult fiscal adjustments ahead, and the credit ratings of some of them are uncertain.

U.S. financial institutions also face a complicated set of risks, albeit from different sources from their European counterparts. Second-quarter earnings were generally better than expected, but much of that performance reflected declines in loan loss provisioning. The sector faces questions about the sustainability of earnings going forward, especially if the economy were to slow further. Moreover, the recent regulatory reform bill and still evolving capital and liquidity standards from the Basel Committee continue to present additional uncertainties for the sector.

The good news is that the financial sector does not appear to suffer from the types of aggregate imbalances that were observed in the period leading up to the financial

crisis. This was the primary conclusion of the financial stability memos that were circulated to the Committee in advance of this meeting. Valuation measures in most markets appear to be broadly in line with fundamental factors or historical norms. Moreover, aggregate measures of leverage in the financial system do not appear excessive, such as the amount of short-term financing used by primary dealers on net, shown in the bottom right panel. Nevertheless, asset prices could always decline, even abruptly, if the outlook for the economy were to deteriorate or if risk aversion were to rise sharply. Elevated uncertainty about the economic outlook, the still fragile psychology of investors, and the remaining hurdles for the banking sector noted above suggest that such risks are currently above normal.

Your final exhibit discusses conditions in mortgage markets and the SOMA portfolio. As reviewed in a recent MarketSOURCE piece, our assessment of the functioning of the MBS market is mixed. Many measures of market activity and liquidity have held near normal levels or have worsened only slightly, and market participants generally report that they continue to trade and take positions without difficulty. However, some aspects of market functioning remain problematic—most notably, the amount of settlement fails, shown in the upper left panel. Particular coupons in the MBS market remain in short supply, which, along with limited consequences of failing, has led many participants not to make delivery on previous trades.

As I discussed at the last FOMC meeting, this chronic fails situation has complicated the settlement of the Federal Reserve's purchases of mortgage securities. In response, the FOMC authorized the Desk to conduct coupon swap operations in MBS to facilitate the settlement of our MBS purchases, with the particular aim of clearing our unsettled trades of the Fannie Mae 5.5 percent coupon security. That approach worked very well.

The effects of the coupon swaps can be seen in the table in the upper right panel, which reports the evolution of our MBS coupon holdings from their unsettled positions at the time of the last FOMC meeting (column 1) to their current unsettled position (column 4). We conducted coupon swaps that reduced our unsettled positions in the Fannie 5.5s by the full \$9.2 billion of our unsettled transactions, bringing that position to \$0. The swaps added \$9.2 billion to our unsettled position in 4.5 percent coupon securities, but we expected to get delivery of those issues given their greater available supply. That expectation was fulfilled, as we managed to settle the entire amount of the coupon swap and now have only a small amount of 4.5s left unsettled. Looking across all coupons, we have whittled the remaining unsettled amounts of our MBS trades down to \$2.4 billion. At this point, we are taking the approach of strongly encouraging the dealers to deliver the remaining amount this month.

Demand for MBS in the market more broadly remains strong, with the spread between MBS and Treasuries, shown in the middle left panel, still at relatively tight levels by historical standards. The panel to the right shows the net supply of MBS that is projected to come to the market over the next two years. As can be seen, under

the FOMC's current policy of not reinvesting principal payments received on its MBS holdings, the market will be provided a decent flow of new securities—the sum of the light blue and red bars. We would expect this supply to be readily digested, given the strong investor demand observed. Note, however, that the majority of new supply comes from the rundown in the Fed's holdings, the red portion. Outside of this adjustment, the market is generating only a modest amount of new production of MBS.

The bottom left panel provides some further details on the projected runoff of our MBS holdings. We have had about \$130 billion of repayment of principal to date, and our baseline projection has another \$340 billion of repayment between now and the end of 2011. If rates were to decline another 50 basis points, the projected amount of repayment over that period would increase from \$340 billion to \$520 billion. In addition, the portfolio has about \$55 billion of agency debt that will mature between now and the end of 2011, in addition to the \$13 billion that has matured to date. Thus, a decision to reinvest the proceeds from maturing agency debt and repayments of principal on MBS would represent a sizable adjustment to the path of the balance sheet.

Turning to the final panel of the exhibit, I thought it might be useful to give you a snapshot of the current financial condition of the SOMA portfolio. Of course, the return on the SOMA portfolio is of secondary importance to the economic mandate of the FOMC. However, since some FOMC members have expressed concerns about potential losses on the SOMA, I thought that this information might be of interest. As shown in the table, the portfolio has about \$115 billion of unrealized gains at current market prices. On top of that, the portfolio generated \$68 billion of income over the past year, primarily from the interest on our holdings.

I will close the briefing with a short update on our draining tools, for which there are no exhibits. Both the reverse repurchase agreements (RRP) program and the term deposit facility (TDF) had meaningful achievements over the intermeeting period.

For reverse repurchase agreements, last week we conducted the first operation using our MBS holdings as collateral. This was an important step to reach, given the additional complexities posed by our use of an external custodian for those securities. The operation was part of a two-week series of small-scale operations that we are conducting to ensure our readiness to operate with all three types of collateral in the SOMA. Separately, we have completed the legal contracts needed to bring money market funds on line officially as counterparties. With that step complete, we hope to announce shortly the list of 26 money market funds that have already been approved. We would then intend to conduct small-scale operations with the expanded counterparties in coming months. I will be circulating a memo to the FOMC shortly after the meeting to describe these and other approaching steps in more detail.

With respect to the TDF, the second and third small-value operations were conducted over the intermeeting period. Both auctions proceeded smoothly, with high bid-to-cover ratios and stop-out rates only a little above the interest rate on

excess reserves. Over 500 institutions have now registered for the TDF; in aggregate, these institutions hold about \$550 billion in reserve balances. New institutions continue to register for the TDF, and System staff will continue to encourage institutions that hold large quantities of reserves to complete the steps necessary to participate in the program. Based on the experience to date with the TDF, the staff recommends moving to a regular schedule for small-value TDF operations—perhaps one auction every other month. These auctions would provide a vehicle for new TDF participants to become familiar with the facility and would allow the Federal Reserve to continue to test its systems and procedures. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you, Brian. Brian referred to two memos on financial stability, which are a regular input to this meeting, as are additional quarterly memos. I propose that we continue to expand and integrate financial stability analysis into these meetings; that will be a natural concomitant of the expansion of our responsibilities under the financial regulatory reform bill, which we'll discuss in September. I urge everyone to think about this issue and make any suggestions you'd like about how we can better monitor financial conditions. Are there questions for Brian? President Fisher.

MR. FISHER. Thank you, Mr. Chairman. I'd like to get a quick briefing from Brian on the private sector's issuance of securities. I'm thinking particularly of the datasheet on page 64 of the Tealbook that shows the volume of issuance. My interpretation of the volume of issuance is that we are back to fairly decent levels—at least the 2006 and 2007 levels—both for investment-grade corporate debt and junk, or high-yield, debt; and, noticeably, there's much more activity recently in the commercial paper markets. If you go back to page 62, which talks about spreads, spreads have pretty much returned to the norm. In fact, if you look at the far- and near-term forward high-yield corporate bond spreads, as well as commercial paper corporate bond yields, we've made progress since the last FOMC meeting. But, even in the commercial paper markets, we're back to almost zero in terms of spreads. So my questions are: Is the issuance schedule robust? Could we describe it that way? Or has it returned to near normal? In addition, what does it tell you?

MR. SACK. Issuance has been robust, especially in corporate bonds, and it has been so for the better part of the past year. I think it's telling us that capital markets for high-quality corporations are open. These firms have tapped the commercial bond market fairly extensively, and that market is not constraining them in any meaningful way. I think much of the issuance has been used to pay down bank debt and other sources of debt. The overall need for funding from the corporate sector is still somewhat sluggish, but I don't think the capital markets are imposing a significant constraint. In contrast, from the Senior Loan Officer Survey, it seems that, even though standards and terms on business loans from banks may be beginning to ease, they still remain relatively tight.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. Brian, I had a question about graph 5 on the 10-year term premium. It's hard to tell, but it looks as if the term premium is falling a lot more than just the difference between the yields on 10- and 2-year Treasury securities, for example. So my question is: How are you decomposing the difference in the yields into a term premium and an expectations component?

MR. SACK. This measure is produced by the Board staff based on a research paper by Kim and Wright. To make this decomposition of yields into policy expectations and the term premium, you need to use some type of structural model; of course, all of those models are imperfect, so I present this as just one measure of the term premium. The term premium has fallen a lot. I don't think it has fallen as much as the 10-year yield, but certainly the model is interpreting much of the decline as a term premium movement. My guess is that both components are in play in the same direction. Certainly, policy expectations have been a big part

of the story for the rally in Treasuries, but it appears from the evidence we have that the term premium has also played some role.

MR. KOCHERLAKOTA. Thanks.

CHAIRMAN BERNANKE. Other questions for Brian? [No response.] Seeing no other questions, we need to vote to ratify our open market operations since June. Can I have a motion?

MR. KOHN. So moved.

CHAIRMAN BERNANKE. It's ratified, without objection. Thank you. All right, let's go on to Item 2, which is the economic situation, and I will turn to Larry Slifman.

MR. SLIFMAN. Thank you, Mr. Chairman. For the most part, the economic data that we have received since the June FOMC meeting have come in to the downside of our expectations. Among the softer numbers, I would highlight the disappointing labor market report for June and the persistently high level of unemployment insurance claims, as well as sluggish retail sales, more downbeat consumer confidence, weaker than anticipated housing activity, and less optimistic readings on business sentiment. Reflecting this news, we estimate that real GDP rose at around a 2 percent annual rate in the second quarter—somewhat less than the BEA's currently published figure, and 1½ percentage points less than we wrote in the June Tealbook.

Before I discuss the details of the forecast, let me briefly cover two other matters: last Friday's labor market report and the comprehensive revision to the national income and product accounts. Regarding the labor market in July, we view the report as broadly consistent with our projection in the Tealbook. The unemployment rate held steady at 9.5 percent last month. And, although private employment rose only 70,000—a little less than we were expecting—the workweek moved up a little more we were forecasting. This combination reinforces the notion that businesses remain cautious about taking on the costs of adding new workers and instead are trying to meet their output goals by using their current workforces more intensively. One piece of good news in the report was that manufacturing employment rose 36,000 in July, following gains that averaged 25,000 per month in the first half of the year, and the factory workweek moved up a tenth of an hour.

As regards the NIPA revision, I would emphasize two elements. First, as you know, real GDP was revised down in the 2007 to 2009 period. As a result of the revisions to actual GDP, we made a modest downward adjustment to our estimate of the level of potential GDP. As we described in the Tealbook, we calibrated this adjustment to roughly eliminate the tension between our estimates of the output gap and the unemployment rate gap in the first half of 2010, and we implemented it by slightly reducing the growth rates of potential in 2008 and 2009. We did not,

however, materially change our assumption about the growth rate of potential GDP going forward.

In terms of our projection, the second important element of the NIPA revision was the sizable upward revision to the saving rate. In thinking about the forecast implications of this revision, we had to weigh two offsetting forces. On the one hand, the larger “shortfall” in consumer spending suggested by the revised data could mean that once hiring picks up more substantially and confidence about the economic outlook increases, households will feel that they have the wherewithal to step up spending that had been deferred during the recession. On the other hand, the shortfall in PCE might reflect an ongoing transition to an even higher saving rate that continues through 2011, as households further repair their balance sheets and rely less on credit than we had previously anticipated. Our forecast gives equal weight to these forces, and the personal saving rate is projected to be about flat at its current level through the end of next year. In effect, we assumed that households raised their saving rate in the wake of the financial crisis—probably for precautionary reasons—to a level that they will want to maintain during the medium term. Needless to say, however, a very wide confidence band surrounds this aspect of our projection.

Let me now return to the issue I raised at the beginning of my remarks, namely, the soft tone of the incoming data. From a purely accounting point of view, the weaker than expected numbers put us on a lower GDP trajectory going into the third quarter, and we’ve reduced our current-quarter growth projection by  $\frac{1}{4}$  percentage point to a  $2\frac{1}{2}$  percent rate. From an economic point of view, the softer readings on activity could reflect heightened concerns among households and businesses about the strength and durability of the recovery. The recent declines in consumer confidence and business sentiment are certainly consistent with that interpretation, as are the results of the recent capital spending inquiries conducted by the Reserve Banks. On the other hand, the recent softness in the data could simply be noise—a head fake, so to speak.

In the baseline projection, we assume that it’s not a head fake, and we anticipate that the fourth-quarter increase in real GDP will be about the same as the third-quarter gain.

By next year, however, we expect that the fundamental forces driving the recovery—accommodative monetary policy, more supportive financial conditions, a gradual easing in credit constraints, and improvements in household and business confidence—will firmly reassert themselves, and real GDP is projected to increase 3.6 percent over the four quarters of 2011.

With output increasing faster than potential, the unemployment rate is expected to move down slowly to 8.9 percent by the end of next year. However, by our reckoning, resource slack still will be substantial.

A high degree of slack, in turn, should continue to put downward pressure on inflation in coming quarters. Even so, with inflation expectations stable and expected

to remain so, core PCE inflation is projected to hold steady at a bit below 1 percent over the forecast period, and total PCE inflation is projected to average slightly more than 1 percent.

In the remainder of my remarks, I want to highlight some of the risks to the forecast that we considered in the Tealbook. One risk is that the recovery could turn out to be markedly weaker than we are projecting. In the “weaker recovery” alternative simulation, we assumed that the expected improvements in the labor market, confidence, and credit conditions underlying our baseline projection are slow to materialize, leading households and firms to hold back on spending through next year. In addition, the sluggish pace of recovery causes equity prices to fall short of the baseline path, which further depresses spending. In this environment, real GDP expands at an average annual rate of only 1½ percent until mid-2011, the unemployment rate remains above 9½ percent until the end of next year, and liftoff of the federal funds rate from its effective lower bound is delayed by two quarters until mid-2013.

An opposing risk is that, in putting together the baseline projection, we may have overreacted to the soft incoming numbers. During the past half century, the economy has gone through several soft patches in the midst of a cyclical recovery that were followed by a resumption of substantial growth. Late 2002 is the most recent example. All economic recoveries are different, of course, and for each of the previous soft patches one could probably tell a special story as to why that incident is not relevant today. Nonetheless, such transitory slowdowns during an economic recovery do occur frequently enough that I think that such a possibility can’t be ruled out for the current situation. One, admittedly tenuous, data point that is consistent with this interpretation was the sizable increase in manufacturing employment in July that is pointing to a brisk rise in factory production for that month.

In the Tealbook, the “virtuous circle” alternative simulation addresses the possibility that we were too pessimistic in the baseline and that, instead, the recent softness in the data is masking an already building momentum in the economy. This leads to a stronger bounceback in spending on consumer durables than in the baseline and an even more marked acceleration in capital expenditures, reflecting a mutually reinforcing cycle of improved optimism, higher spending, greater hiring, and increasing credit availability. The strong activity, in turn, reinforces optimism in financial markets, which boosts equity prices. This virtuous circle causes real GDP to expand at an annual rate of 5¼ percent, on average, in 2011 and 2012, pushing the unemployment rate down rapidly.

I want to end with a few comments on the risks to our inflation projection. In the June Tealbook we characterized the risks as elevated but roughly balanced. I think that is still the case in our current forecast. On the downside, with the economy recovering slowly and the margin of slack very wide, inflation expectations could prove less stable than we expect and fall significantly. We explored such a possibility in the Tealbook.

That said, many outside forecasters anticipate higher inflation than in the staff projection despite similar or more pessimistic outlooks for the real economy. Indeed, according to this morning's release of the Blue Chip Economic Indicators, the staff inflation outlook still is similar to that held by the ten respondents with the lowest forecasts for inflation. Of course, given the historical track record of inflation forecasts, we wouldn't be surprised if inflation next year came in as high as most Blue Chip forecasters predict, and they shouldn't be surprised if it comes in as low as we project. Nathan will now continue our presentation.

MR. SHEETS. According to the advance NIPA data, net exports subtracted an estimated  $2\frac{3}{4}$  percentage points from economic growth in the second quarter. I wish I could say that we had seen this coming. But sadly, this outcome is a full  $2\frac{1}{2}$  percentage points more negative than we had projected in the June Tealbook. (I am taking pride in the fact that we at least got the sign right.) While real exports barreled along at a 10 percent pace in the quarter, just a touch stronger than we had expected, real imports are estimated to have surged nearly 30 percent, their fastest quarterly growth in more than 25 years. This increase was broad-based and included a large rise in capital goods imports, in line with the strength of U.S. E&S investment. While the release of the June trade data tomorrow morning will no doubt bring further revisions, the import data to date have shown no signs that the appetite of the U.S. economy for foreign goods has faded in recent months.

More generally, we see the strength of imports in the second quarter—as well as the ongoing vigor of exports—as a continuation of the cyclical rebound in U.S. trade. Both imports and exports fell during the financial crisis more rapidly and more substantially than our models predicted and have bounced back in a similar fashion. Incorporating the second-quarter data, real imports have now retraced nearly two-thirds of their 20 percent crisis-driven decline, while real exports have recovered more than four-fifths of their 15 percent drop. The upshot is that, going forward, trade is likely to grow somewhat more slowly than it has over the past year.

Specifically, we see import growth moving down to roughly a 5 percent pace in the second half of this year, reflecting some payback from the second-quarter surge and drag from the dollar, which has depreciated about 3 percent in broad real terms since the last FOMC meeting. In 2011, imports should expand at a  $6\frac{1}{2}$  percent rate, as the U.S. recovery gains steam. Export growth is likely to be somewhat stronger than import growth, hovering in the 8-10 percent range, supported by the solid expansion abroad and stimulus from the dollar. Taken together, net exports should add just under  $\frac{1}{2}$  percentage point to U.S. GDP growth on average through the second half of this year and be about neutral next year. We certify that these projections for net exports will be within 3 percentage points of the actual outcomes.

CHAIRMAN BERNANKE. Is that a Sarbanes-Oxley requirement? [Laughter]

MR. SHEETS. I should say, "I hope we can certify." [Laughter]

For many of the foreign economies, the pace of economic growth seems to be cooling some, in line with our expectations of a sustained, but moderate, global recovery. In emerging Asia, GDP growth in China and in Korea stepped down in the second quarter, albeit to still strong rates; and elsewhere in the region, higher-frequency indicators, such as purchasing managers' indexes, have eased a bit. In Brazil, the growth of industrial production has slowed as the government has unwound fiscal stimulus measures. And the recent softening of U.S. growth will likely be echoed in a slower second-half pace of expansion in Mexico and Canada.

Markets have shown some uneasiness about these signs of moderation abroad, particularly regarding the outlook for China. Policy tightening measures in China do seem to have tempered the pace of activity there more quickly than we had expected, leading us to edge down our forecast. But the authorities have shown a remarkable ability in recent years to keep the economy on an even keel, successfully navigating between the twin risks of overheating and hard landing. At present, we see scope for policy stimulus, if needed, to maintain economic growth at roughly an 8½ percent rate through the forecast period. In addition, with Chinese housing prices recently leveling off and credit growth having slowed, financial stability risks there may be diminishing. Notably, central banks around the world seem to have taken the signs of cooling global activity in stride, with many moving over the intermeeting period to reduce slightly the degree of monetary accommodation.

Europe has been an important exception to this picture of near-term moderation. U.K. GDP surprised sharply on the upside in the second quarter. And, even more striking, euro-area PMIs and economic sentiment measures have risen through July, and industrial production has trended higher, defying my admittedly grim expectations. In light of these data, we now estimate that real GDP in the euro area rose 2¾ percent in the second quarter, up a percentage point from our last forecast. This near-term strength has been concentrated in the core economies, especially Germany, where exports have risen at a rapid pace through June, benefiting from the rebound in global trade. The weakening of the euro during the first half of the year seems to have provided some support to activity as well. However, the euro's appreciation over the intermeeting period—including a 7 percent rise against the dollar—will limit this support somewhat going forward. In contrast to Germany, indicators for Greece and Portugal underscore the much weaker performance of those economies that are undergoing forced fiscal consolidation.

Financial conditions in Europe also appear to have settled some. Two significant risk events—the ending of the ECB's first one-year long-term refinancing operation and the publication of the EU-wide bank stress tests—passed without disruption, leaving stock markets modestly higher and risk spreads on sovereign debt generally lower. Investors also seemed to take comfort from favorable earnings reports from European banks and from several oversubscribed government-debt auctions by vulnerable euro-area countries.

While there is certainly scope to question some aspects of the stress tests, the information released during this exercise—especially details on bank holdings of

sovereign debt—has enabled analysts to gauge for themselves the extent of capital shortfalls, with the range of resulting estimates well within the capacity of European governments to absorb. Since the completion of the stress tests, funding conditions for more vulnerable European banks have thawed some, but we see little evidence that private investors are poised to open their checkbooks to recapitalize these institutions. Although the stress tests have provided some confidence regarding the asset side of the European banks' balance sheets, much uncertainty remains regarding the liability side of their balance sheets and their funding strategies, as well as the medium-term profitability of some banks' business models.

Given these upbeat macro data and somewhat less strained financial conditions, we have revised growth prospects for the euro area up slightly. In addition, our sense is that tail risks for the region have eased noticeably. That said, we continue to expect that euro-area growth will be muted, averaging just 1¼ percent through the end of next year, as the continent contends with an uneven road to fiscal consolidation and the banks struggle to repair their balance sheets.

All told, our forecast for the foreign economies is little changed since the last Tealbook, with the small upward revisions to Europe largely offset by modest markdowns elsewhere, most notably in China. We continue to see aggregate growth abroad stepping down from above 4½ percent in the first half of this year to a more sustainable 3½ percent pace through the forecast period. Although the recent data seem broadly in line with our projection for a continued—but moderately paced—recovery abroad, we are now at a pivotal point in the cycle at which private domestic spending in many countries will need to strengthen to offset diminishing stimulus from inventories and macroeconomic policies. Moreover, the softer near-term outlook for the United States is a salient concern for some countries that have relied on considerable support from external demand thus far. We will watch closely to see whether private spending across the globe rebounds as projected. Thank you, and we'll be happy to take your questions.

CHAIRMAN BERNANKE. Thank you very much. Are there questions for our colleagues? President Lacker.

MR. LACKER. The Tealbook reports that you estimate that the extended and emergency unemployment benefits are boosting the unemployment rate by approximately 1 percentage point right now. That effect has increased over the last 18 months. Some of this effect, as you report in footnote 5, represents workers who you believe would otherwise be out of the labor force, and some represents workers who would otherwise accept job offers. I was wondering if you're willing to take a stab at the decomposition.

MR. SLIFMAN. Quite frankly, these are all really rough guesstimates based on what we've seen in history, so I don't think we want to pin ourselves down that closely.

MR. LACKER. Thought I'd give you the opportunity.

MR. SLIFMAN. Okay.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. I'll start with a comment that I've actually made before. I think the international briefing and the whole Tealbook, compared with when I first joined the Committee, is much more informative—indeed, it has become superb under your leadership, Mr. Chairman. I came here before you were Chairman.

Nathan, I want to go to a point you made. You said that we're at the point where private domestic spending in many countries must basically pick up to offset the decline in government stimulus; I assume that may be true here as well. I want to go to the first page of the domestic economic developments and outlook briefing, where there's the following statement: "Financial conditions appear slightly more supportive of economic growth than in June." I'm wondering if, after the inputs of the last few days, you still would argue that. Nathan, if you would, please argue that on the international side.

MR. SLIFMAN. I'm not quite clear. What is it that you have in mind?

MR. FISHER. Well, I mean that we're here to debate principally financial and monetary conditions, but you have a statement, "Financial conditions appear slightly more supportive of economic growth than in June." Is that still true?

MR. SLIFMAN. Yes, I would say so. I think that many of the things that Brian pointed to in his briefing certainly are consistent with that statement.

MR. FISHER. I agree. Nathan?

MR. SHEETS. I think so. Stock markets are up generally a little bit. Longer-term bond yields are down generally. How to interpret that, I think, is an open issue. On the other hand, commodity prices are up a little bit and, in certain soft commodity classes, prices are up a lot due to the drought. But, in general, I think we would still say the situation is slightly more accommodative and more supportive than before.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I have a question for Larry. I thought it was interesting that you laid out a sort of dichotomous view of the consumer; that is, the consumer could gain confidence if employment continues to improve, and that would play through to spending, or the consumer could be on a continued deleveraging track trying to raise saving, and that would play through to weakness. My question is: What tools do we have to dig deeper to try to get a sense of which way that arrow is actually going to go? It strikes me as being one of the key swing factors in our outlook, and it's frustrating not to have much more of a profound sense of what really is happening.

MR. SLIFMAN. I wish I could point to a specific model result that would be able to give you a satisfactory answer. Let me take a step back to explain the problem. Prior to the NIPA revision, it looked like consumption was just following the same old path that one might have expected based on looking at wealth, income, interest rates, transfer payments, and so on. And that seemed a little odd to us in some ways, because one would have thought that the financial crisis should have led to some abnormally low consumption relative to these standard sorts of determinants. Now, with the revised data, we're actually seeing the error in our consumption functions that we thought we should have been getting all along. So, in some ways, the fact that

we do have this residual is a bit more satisfying, in the sense that it makes everything hang together a little bit better.

But here's why we have trouble answering your question directly. When you have a residual, you have to make a decision about how fast it's going to close. In making that decision, we didn't just say, "Oh, the saving rate could be here, or it could be here," and then just go down the middle of a bimodal distribution and take the mean. Rather, as we described in the Tealbook, we see households as having different forces weighing on them, and these are behavioral issues. In other words, households themselves are going to have to weigh these various forces as they make their plans about consumption over the coming year and a half. And, as we described in the Tealbook, we could see forces that would lead them to want to boost their spending—pent-up demand kinds of forces—or we could see the caution that they have exhibited so far continuing and intensifying to some extent. Our view is that, in making their decisions, households would probably choose to have their consumption rise roughly in line with their income—neither faster nor slower, but roughly in line. With that said, we admit that there's a huge, huge range of uncertainty around that.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. I just wanted to ask a follow-up to President Fisher's question. He asked whether you thought financial conditions were more supportive of economic growth. I'm wondering whether growth prospects are more supportive of financial conditions. That notion popped into my brain the first time I saw that phrase, and I've been meaning to ask you about this, particularly since, in the intermeeting period, some of the changes in financial market conditions seem plausibly related to improved prospects for growth, such as equity markets, declining risk premiums, and the like.

MR. REIFSCHNEIDER. I'd say that we tend to interpret the situation in the opposite way. As Brian discussed in his briefing, some of the movement in longer-term interest rates could be due to a fall in the risk premium or term premium—and we could ask what's driving that—but some of it also seems to be related to a pronounced downward adjustment in the expected path of short-term rates, which is probably related to a weaker economic outlook. So, in that sense, that portion of the decline in long rates is being driven by a weaker outlook for the real economy rather than the other way around and, possibly, by a more pessimistic view on inflation.

It's also important to be careful when we say that we're scoring that decline in long-rates as a plus for the economic outlook. We have an accounting that says we look at the news releases coming in on the real side, and we make an assessment of what they imply for real activity going forward, holding interest rates constant. Then, that's offset to some extent by the fact that long rates adjusted down in response to that weaker economic outlook. On net, however, the effect of the news could be negative or it could be positive, but it's not as positive as the shift in the long rates itself would say.

Similarly, some of the support to the stock market is related to lower interest rates—though, not all of it, as some of it seems to be the decline in risk premiums, as Brian said. But we need to be careful when we decompose this, because not all of that movement in the stock market is necessarily favorable to the outlook. Some of it is taking on board the lower interest rates that are also part of the valuation.

MR. SHEETS. I think an important addendum from the global perspective is that, with these developments in Europe, our perception—and I think the market's perception—is that

there's less tail risk out there. That might also be somewhat more supportive of financial conditions.

MR. FISHER. Excuse me—less tail risk on the downside or upside or which side?

MR. SHEETS. Less downside tail risk.

MR. FISHER. Thank you.

MR. SHEETS. For example, six weeks ago we were worried about some sort of a near-term apocalypse in Europe, which now seems much, much less likely.

MR. LACKER. If I could just follow up—the term premium plot that President Kocherlakota referenced would seem to indicate that the bulk of the change in the 10-year rate is not expected interest rates, but rather it's this term premium. More broadly, my general impression about the intermeeting period is that we've seen a broad shift in asset allocation by investors towards some riskier assets—into longer-term Treasuries, corporate debt, equities. That broad shift into riskier assets could suggest a little more confidence. I don't think of that as an autonomous, exogenous shock; instead, I think of that as related to expectations. I'm just wondering if that's an accurate view about financial markets over the intermeeting period.

MR. SACK. Well, I wouldn't downplay the shift in policy expectations. I think what you just described is certainly part of the story, but I think that policy expectations are a big part of the story, and we see that in various ways. The 5-year Treasury yield fell more than the 10-year yield, so it's that intermediate horizon, which has a lot of policy sensitivity, that moved the most. We saw the responses about the expected policy path in our Desk dealer survey shift a lot, as I showed in the briefing. And there are other signs, too: If you look at, say, options prices, some of the volatility and upside risk associated with rates a year or two ahead have really come down. I think the market has seen the policy outlook solidifying around being at these low

levels for a long time, and that has probably been a big factor—not the entire factor—but a big factor driving movements in asset prices over the period.

CHAIRMAN BERNANKE. Did you draw any distinction between the effects of earnings information and broad macroeconomic information?

MR. FISHER. That's very important.

MR. SACK. Absolutely. I pointed to the second quarter earnings in my briefing, and, as you understand, the story there is that, relative to the GDP outlook, the earnings outlook has been surprisingly favorable. So that's another factor supporting equities and corporate bonds, even relative to the macro outlook.

CHAIRMAN BERNANKE. Okay. Are there other questions for our colleagues? [No response.] Seeing none, let's turn to our go-round, and we'll start with President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. Good morning. The Third District looks a lot like the nation, so, rather than talking specifically about the District, I'm going to talk about the national picture broadly. As we've heard, incoming data have suggested that the recovery may have lost some of its momentum. Whether this is just the summer doldrums or whether this heralds much worse times ahead is difficult to determine.

Although the outlook may have become more uncertain, I continue to place high odds on the recovery continuing at a modest pace over the medium term. In my own view, I think it's premature to read the data as evidence that we're heading towards a double-dip recession or a serious retrenchment. Financial conditions have actually improved, as we were just saying, since the last meeting, and perhaps we should note it in our statement. The markets also seem to be functioning normally for the most part. Monetary policy and financial conditions are very accommodative, and there appears to be ample liquidity in the system. Treasury yields are now

3 percent and have fallen by 30 to 50 basis points since our June meeting and by more than 100 basis points since April. Stock prices are up, reflective of better than expected earnings at many firms. And, as we have just been noting, initial steps taken in European countries to address their fiscal imbalances and the results of the stress test seem to have helped quell some of the fears about tail risks.

While the new data suggest that economic growth is likely to moderate in the second half of the year, it's good to remember, as the staff noted, that recoveries are not always linear. Some of the weakness in monthly data was expected. For example, the housing tax credit pulled home sales forward, so the weakening in sales after it expired was not a surprise, nor should it have been. It will take a couple more readings, in my mind, before we have a better sense of whether the forecast of a gradual improvement in housing activity needs to be revised. Temporary hiring of students has also obscured the employment picture, and here, too, I believe, we need a few more months of data before the underlying employment trends reveal themselves.

Overall, the staff has marked down modestly its forecast for the second half of 2010 by approximately ½ percentage point, and yet the forecast for 2011 has not changed. The forecast is, thus, for a transitory soft patch, not a falling off the cliff. I would also note that the staff's forecast of inflation was revised up very slightly. Such a change in the forecast hardly suggests to me the need for a policy response, which might be interpreted by markets to mean that much more aggressive accommodation is on the way.

There's no question that the improvement in the labor market has been slow and less than desirable, but, given the size and nature of the shocks that have hit the economy, that slow pace has been part of everyone's forecast for some time. Real adjustments need to take place. It will take time for a reallocation of workers from the shrinking housing and finance sectors to go into

other sectors, for skill mismatches that are rampant—driven by productivity increases in firms or the depreciation of skills from the long-term unemployed—to be resolved. One has to ask whether monetary policy is the right tool to address these issues.

At the same time, monetary policy is the right tool to use against sustained deflation, and I certainly support a dialogue on policy approaches one can take to address such a situation. However, as I have argued at previous meetings, I believe it is premature to conclude that we are headed toward sustained deflation. Nominal GDP has been growing at an annual rate of more than 4 percent over the last three quarters. In contrast, in Japan's lost decade, nominal GDP growth was zero. Inflation is at a low level, but some measures, like the core CPI, have actually accelerated in the last three months. Not all components are decelerating. We actually have seen very large changes in relative prices caused by a very large shock to this economy. As the economy restructures, I think that we will see the threat of deflation diminish.

Nevertheless, in this environment we need to monitor inflation expectations quite carefully. On this score, there is a degree of comfort. Despite the weaker inflation numbers, inflation expectations appear to be relatively well-anchored. Measures based on TIPS, especially at the shorter horizon, are down somewhat since the first quarter, but have been relatively stable recently. Analysis by the New York Fed's Market Group indicates that deflation probabilities based on TIPS have moved little in the past month and remain significantly lower; that is, the probability of deflation is significantly lower than it was at the end of 2008 and the beginning of 2009. Survey measures of inflation expectations have also been relatively stable. The preliminary results of our SPF which will be announced next Friday, show that the 10-year forecasts or inflation expectations changed ever so slightly, from 2.4 to 2.3 percent, down 0.1 percentage point. The SPF's probability of deflation for both the core CPI and the core PCE

are both minuscule—less than 3 percent—again, considerably below the levels that we saw in 2009.

I'm also concerned that the press and market commentators may be overreacting to the incoming data on both real activity and prices, and we should not allow ourselves to be stampeded into a panic. We know our data are subject to revision. For example, in recent research, Dean Croushore shows that, on average, revisions to the PCE inflation rate have been upward over the last decade. Recall that in May 2003, when the FOMC began citing the possibility of unwelcome substantial fall in inflation, the data suggested that inflation had been falling since mid-2000. However, by December 2003, most of that decline had been revised away, and, just a few years later, the revised data showed that there was no decline at all but that inflation actually rose during that period. Of course, there are cases where data on growth or prices or output are revised in the other direction.

My point is that our forecasts are data-dependent, and the data are revised. Our forecast will be revised as well. So we need to remember that recoveries are uneven and hard to predict, and that there are considerable error bands around our forecast and around the data we currently observe. Our actions and policies should be a source of stability for the longer term, and, given the uncertainties, we should avoid reacting to high-frequency changes in the data that may prove either transitory or in some cases illusory. As you can tell, I'm in favor of no change in our statement or in our policy today at this meeting, and I'll have more to say about my reasons for that in the next go-around. I might note that I'm disappointed that alternative B2 was removed from the table last night as an option. Thank you very much, Mr. Chairman.

CHAIRMAN BERNANKE. President Plosser, B2 is still effectively there in the sense that paragraph 4 can be excluded.

MR. PLOSSER. I'll talk more about that later.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. Overall, economic conditions in the Eighth District have improved slightly during the intermeeting period. Estimates indicate that Eighth District employment was about flat between April and June, but the level of employment remains higher than earlier in the year. Residential construction and real estate markets in the District have improved. All major metropolitan areas, i.e., MSAs, experienced growth in home sales compared with the same period last year. Commercial and industrial real estate markets continue to struggle, and reports indicate that the near-term outlook for these sectors is dim. Contacts at large firms, especially those with significant global businesses, seem to be cautiously optimistic about the second half of 2010. They do not expect, however, to add workers to any significant degree. Smaller businesses tend to be less optimistic. Their sales and profitability have improved but generally remain less than satisfactory.

In the national outlook, I concur with the Tealbook that data have been suggestive of a somewhat weaker economy in recent weeks. I think that the most likely outcome is that the current period weakness will turn out to be merely unevenness in the pace of recovery, but at this juncture we cannot be sure. We face increased risk of further deceleration. We are more susceptible to a negative shock than we were earlier this year. An important bright spot is that the financial market turmoil in Europe seems to have abated. One indicator of this is the Federal Reserve Bank of St. Louis financial stress index, which has moved off its highs and to lower levels recently.

Inflation is expected to remain low. Core CPI inflation measured from one year ago is about 90 basis points. The trimmed mean version from the Federal Reserve Bank of Cleveland

is about 80 basis points. The core chained CPI is about 60 basis points. Core PCE inflation measured from one year ago is higher, at 1.4 percent, but the core market-based PCE inflation rate measured from one year ago is 1.1 percent, and the trimmed mean version of that from the Federal Reserve Bank of Dallas is 1 percent. In addition, the Tealbook, page 32, has core PCE inflation running at about 1 percent each year through 2013—in other words, for the next three and a half years.

I conclude that many core measures of inflation are running at about 1 percent or less. This is not alarming by itself, but it does mean that we remain susceptible to further negative shocks that could drive inflation and inflation expectations lower. If this Committee remains with the near-zero interest rate policy and simultaneously core inflation runs at a pace less than 50 basis points, the possibility of entering a Japan-like situation would become very real indeed. If we can recognize that risk ahead of time and put a policy in place to deal with it, that outcome will be avoided.

Inflation expectations have also fallen recently. Survey measures tend to convey considerable stability on this dimension, but, in my view, these measures are not sufficiently sensitive to market events to be useful. By the time these measures move either higher or lower, it will be too late. TIPS-based expected inflation has fallen in recent months, presumably in response to the European sovereign debt crisis. The Federal Reserve Bank of Cleveland, which is receiving high marks in my comments here, publishes measures based on research by Joe Haubrich, George Pennacchi, and Peter Ritchken. They try to make appropriate adjustments to the TIPS data to extract inflation expectations, so it's a more sophisticated reading of the TIPS data than you would normally get. Their latest reading suggests that expected inflation has fallen at all horizons, and it ranges from a one-year level of about 90 basis points to a 10-year level of

about 170 basis points. So the whole spectrum of expected inflation from one year out to ten years—they can do every year in their analysis—has fallen. That curve is upward-sloping, which is encouraging, because it means that markets believe that inflation will eventually return to target. But that return is quite a ways in the future, and even at ten years, that's 170 basis points. If that curve should invert, I would be very concerned. It's not inverted at this point. In any event, that whole curve has fallen substantially from earlier levels.

A key problem that we face is that conventional interest rate policies could become passive. Under current policy, when a negative shock is encountered, we cannot react by lowering the policy rate, and we can only react by altering the length of time financial markets expect that we will remain with a near-zero rate policy. This tool has some theoretical backing, but it is suspect from a practical perspective. We are talking about extending promises to stay at zero many quarters or years in the future, depending on how the economy performs. The effectiveness of such a tool depends on the foresight of the private sector, our own credibility, and the length of the horizon. I submit that the effectiveness of this tool is questionable at this point. It's okay with me to try to manipulate these expectations, but I think we should supplement that policy with a more tangible policy. The policy to stay at near-zero rates for a long time can also be counterproductive. That policy is also consistent with a mildly deflationary steady state like Japan's. Escape from that type of outcome is problematic.

My bottom line is that meeting future negative shocks solely with promises to stay low for longer may not be sufficient to avoid the deflationary trap. For this reason, I think the best alternative policy, on balance and considering everything that we could do, is to signal that we may adopt additional quantitative easing measures. I will discuss this further in my comments during the policy go-round.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. The incoming data have been disappointing. As inventory rebuilding subsided, most forecasts anticipated improvements in final sales. However, final sales have yet to show any evidence of more rapid growth, averaging less than 2 percent over the past four quarters. With state and local governments continuing to retrench, consumers saving more, and home sales weak after the curtailment of the tax credit, the second half of the year is likely to be subdued. Like the Tealbook, I expect no improvement in the unemployment rate for the balance of the year, and I worry that economic growth that barely attains potential, coupled with extremely high unemployment, may begin to affect the longer-run health of the economy. In particular, such a slow and protracted recovery runs the risk of inflicting collateral damage to labor markets as the long-term unemployed become increasingly discouraged. The departure of 1.2 million workers from the labor force over the past three months is consistent with this concern.

The inflation rate is quite low and further disinflation remains likely, given the underutilized resources in the economy. Another large negative shock could push disinflation to outright deflation. It's easy to imagine the fiscal problems in much of the developed world triggering a crisis that pushes us in this direction. This outcome may have a higher probability than we'd like to believe, judging from the extremely elevated sovereign spreads that remain. Apparently, many investors are pricing in a high probability of sovereign default in several European countries over a reasonable time period. Because a negative shock could occur, we should be devoting time to devising and evaluating plausible alternative monetary policy strategies. While fiscal policies would likely be the most effective tool, there is serious question whether a fiscal policy response would occur.

In terms of potential unconventional monetary policy measures, should they become necessary, I would prefer large purchases of mortgages to large purchases of government bonds. Government bonds are already in high demand, and other assets will not enjoy the same flight to quality as government bonds if the economy deteriorates. In considering additional purchases of mortgage securities, I would argue that we need to understand better the effects of our first purchase program. Recent research by Andreas Fuster and Paul Willen in a Boston Fed working paper examined the effects of the LSAP on the mortgage market. They highlight that borrowers choose among a combination of points and interest rates, and many borrowers with low FICO scores choose mortgages with a higher rate and lower points. Because we focused our LSAP program on low coupon mortgages, the largest effect was on borrowers with high FICO scores and high incomes who chose low interest rates and more points. This unintended consequence of the program highlights that we may need to better understand how our actions affect the entire distribution of the mortgage products and potentially focus on those segments of the market that would best support new homebuyers should we decide that a larger LSAP program is necessary in the future. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. My outlook hasn't changed by that much over the intermeeting period. In fact, since spring my projections for output have generally been among the weakest on the Committee and weaker than the Tealbook path. Coming into this meeting, I find that my baseline outlook for both output and inflation is very similar to that of the Tealbook. Misery, as they say, loves company, but in this case, I wish I had less company.

We all recognize that this has been a very difficult forecasting environment. We are all trying to figure out how to account for the effects of such factors as tight credit conditions, weak

housing markets, poor consumer confidence, and long spells of unemployment. I have been fairly skeptical about how quickly these elements of the economic environment would improve, and, unfortunately, my skepticism appears to be warranted. Financial markets had not been as skeptical as I have been, but the weaker labor market reports and the benchmark revisions to GDP appear to have convinced many people that we are in for a long slog.

The banking sector provides a good example of the headwinds that I am trying to quantify. While financial market conditions have generally improved, as the staff memos indicate, they continue to carry downside risks. I asked my bank supervision staff for an assessment of Fourth District banks, including our three SCAP banks. On the plus side, the loan losses to date have not been as bad as projected under the adverse scenario. However, many banks are seeing less revenue growth than was anticipated, primarily as a result of sluggish lending conditions. Moreover, commercial real estate exposures still lurk on bank balance sheets. To me, these results validate incorporating substantial limits on both credit availability and credit demand into my outlook throughout the recovery period. As I said, I have tried to include all the various headwind factors into my baseline projection since the spring, but I still worry that I have not fully accounted for the degree of restraint that these factors might be imposing on output and inflation.

When I speak to my business contacts, very few admit to optimism. Nearly all of them express uncertainty about the environment, and nearly all of them wonder where the strength in the economy will come from. If I were to transform these emotional sentiments into numbers, they could very well look like the weaker recovery scenario in the Tealbook. Clearly, this scenario brings with it very large social costs and would justify an even more aggressive monetary policy response.

On the inflation front, the GDP revisions bumped up the PCE inflation numbers over the last two quarters, but this was largely in the nonmarket items that are very difficult to forecast and are likely unobserved by households. When looking at either the CPI or the market-based PCE components, the disinflationary trend is evident and is consistent with my forecast that inflation will remain below my longer-term objectives for the next few years. My baseline projection for inflation assumes no change in inflation expectations. Unfortunately, as President Bullard pointed out, my staff's model-based measures of inflation expectations have detected a slight decline in expectations at all time horizons. If a pronounced decline in inflation expectations were to develop, it would be all the more difficult to prevent actual inflation from declining further.

Ordinarily, I like to develop my outlook so that the risks are balanced, in the sense that the probability of output or inflation falling below my projection is equal to the probability of their running above my projection. In this environment, if we are surprised to the downside, our limited and untested policy tools raise the risk that we would find it even more difficult to achieve our objectives. We face no such risk for upside surprises. For this reason, I regard the risks to my outlook for both output and inflation as being skewed to the downside, as I have been indicating since the spring. And I will hold my views on how to respond to this situation for our upcoming policy discussion. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, like President Piantolo, I can report that the Dallas Fed's forecasts were at the lower end. In fact, I think we had the lowest forecast for growth for the second half of this year; it's at about 2.6 percent. The Tealbook is now more closely tracking what we were thinking in terms of the immediate future and, perhaps, is more optimistic than we

are farther ahead. I'd like to talk very briefly about what we see in our region, and then I want to address the issue that Nathan raised about private domestic spending as a generator of employment.

The District economy and, particularly, Texas, which is the largest part of the District, are experiencing broad-based economic growth. We have seen it taper off somewhat. We do have positive developments, and we have some offsets. Positive developments really revolve around, of course, the energy sector, where we are seeing the rig count increase. Venture capital spending in Texas rose almost 20 percent in the second quarter. The S&P/Case-Shiller Home Price Index shows that our houses are edging up in price, 0.3 percent in May, and currently prices are about 3 percent above the year-ago level. So we have been fortunate on that side. Retail sales are inching upwards. The July Senior Loan Officer Survey saw a glimmer of easing in C&I lending and pricing. We're seeing significant competition coming from the large national banks, and that's creating some angst among the local bankers. Very importantly, the bottom line is that we expect employment growth to be somewhere between 2½ and 3 percent this year, which is between 250,000 and 300,000 jobs on our base of 10 million workers.

District exports fell 2.2 percent in May and continued to fall in June, but they're still up about 25 percent on a year-over-year basis. So we continue to be very fortunate by virtue of our location and whatever policies drive people to locate in our area.

I'd like to turn to my survey of business leaders. As I pointed out to you in a private memo, Mr. Chairman, I've broadened that somewhat to include smaller employers. So the base now runs from companies with 100 employees to the largest companies in the country, and I've included some new companies that give me a better sense of different sectors, and I'd like to summarize them very quickly.

In brief, whether public or private, large or small, these companies are building and hoarding cash. If you look at the old S&P industrials—which I still like to look at, maybe because I'm old—you'll see that 130 percent of expected operating earnings for this year is the level of cash being held. That's 10.2 percent of market value, a nearly historical high. They're doing so primarily for three reasons, according to my interlocutors. One, they want to protect against a downturn. Two, they're uncertain about the impact of tax and regulatory changes, something I refer to as random refereeing—it's a very real and very inhibiting phenomenon, particularly with regard to employment of personnel. And, three, they want to be able to manage their margins—they're buying back shares, if they need to, or paying dividends to keep their shareholders happy if needed. Those are the publicly traded corporations.

This morning, the newly released NFIB survey reports that 91 percent of the businesses surveyed say that their credit needs are being met, and only 4 percent report that financings are their top business problem. Just to quote that report, "credit availability does not appear to be the cause of slow growth."

For publicly traded companies, debt is cheap. Demand in the investment community is great. My friends on the underwriting desks—and these are old, battle-scarred veterans I dealt with many years ago—report that they've never seen the levels of bidding that they're seeing now. They're seeing ten-to-one ratios. For example, one of the companies that I survey regularly is Kimberly-Clark. It issued a \$250 million, 10-year, single-A credit. It received \$3 billion in indicated interest, allowing it to price barely 67 basis points over Treasuries. On the private side, I hear—as was confirmed by the NFIB survey—no complaints about the cost of borrowing, though some complain about the stinginess of bankers' lending terms.

If you put these points together, I would say the cost of capital is not an issue. Availability is a significant issue, but not for all. The most vexing issue, as one of my interlocutors put it succinctly, is the following question: “If I raise funds, what am I going to do with them?” Apparently, they’re not going to put it to work in the immediate future expanding the U.S. workforce, which is my greatest concern. All but one company I surveyed are budgeting for no to minimal net new hiring in the United States, partly because they’re realizing efficiencies that they wish to keep. They also have the unpleasant memory of having to lay people off, and they don’t like it—it’s burned into their memory. Furthermore, they don’t know how to cost out health care and other new social overhead. Let me illustrate that point with a quote. Rex Tillerson of Exxon, the biggest company in the world, said, “I think it’s fair to say that we have access to all of the consultants, accountants, and lawyers anybody would want. If we can’t determine what a new employee costs, how can a small business do so?” Finally, in some instances, the return on investment in labor elsewhere is higher. To give you another quote, this is what I heard from the CFO of a company that’s currently expanding capital expenditure and acquiring firms abroad: “Why should I take the chance in hiring American workers I don’t know the cost of when I can hire great talent abroad that I can budget with greater certainty?”

I would recommend, without taking too much more time, that you look at the nice piece that was in yesterday’s *Wall Street Journal*, “Why I’m Not Hiring,” by a fellow who runs a company of 83 employees. “As much as I want to hire new sales people, engineers, and marketing staff in an effort to grow, I would be increasing my company’s vulnerability to government decisions to raise taxes, to policies that make health insurance more expensive, and

the difficulties in this economic environment.” Not once does he mention the cost of capital or access to money.

The rails, express shippers, and ship and freight operators report an improvement in volume of consumer goods shipped, but, at the point of sale, the prices of what has been shipped have been marked down. However, the CEO of Walmart, who does not participate in the chain store reporting, tells me that they realize they’ve been cannibalizing their own margins by aggressively discounting. They’re in the process of removing those discounts. They have not given up customer counts, so they expect to get back to normal pricing. I also hear that reflected with other retailers; for example, J.C. Penney’s is in the second and third quartile, and even Disney is discovering that it, too, is able to reduce or eliminate its discounting without giving up customer count.

The bottom line among these companies is that employment growth is anemic, which is worrisome. Price pressures are nil, except in the transportation and some commodity spaces. Deleveraging in the business sector continues. Liquidity is building. Almost all expect slower GDP growth in the second half than what they saw in the first half, and almost all view deflation as a tail risk.

Now, as to random refereeing and the general outlook for the all-important issue of employment, which is part of our mandate—they lead me to be somewhat pessimistic in the short term. But I want to remind you that, if and as the fog lifts on regulatory and tax issues and the referees achieve consistency, there appears to be significant potential for hiring and for cap-ex at home, which is the outcome we all desire. That is my review, Mr. Chairman. I have significant comments about what we’re going to talk about in terms of the statements and I’ll withhold them until we get to that part of the discussion. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. There's no getting around the soft tone of the incoming economic data since the last meeting. The boost from the inventory cycle is largely behind us. Housing market activity fell more after the tax incentive expired than many were expecting, and the revised NIPA data show that consumer spending has not been as robust as we thought over the last five quarters. Against that backdrop, the disappointing employment reports have raised concerns about a second dip or even deflation.

I have lowered my expectations for second-half economic growth, and I do think the risk has increased that growth is going to be even soggier than I expect. But I believe the economy is still on an economic recovery path. And while we need to be realistic, I think we should avoid encouraging pessimism out there.

Even though payroll employment has fallen short of expectations, I think the labor market continues to slowly heal. Aggregate hours and average work week ticked up last month, consistent with the upward trends in those series since the first quarter. And I think interpretation of the labor market data needs to take into account the presence of those extended and emergency unemployment benefits I was talking about before.

As I said, the Tealbook estimates that these have raised the NAIRU by about a percentage point over the last 18 months, so it's now a percentage point higher than it otherwise would be. Taking that over 18 months, it translates into 70,000 jobs per month. If they all came out of the labor force, that would be no difference in payroll employment. But if they were all people who otherwise would have taken a job, it would represent 70,000 more per month in payroll employment growth. Something in that range, or close to that, seems plausible to me, because we've been hearing from several contacts in our District about the effect of unemployment

benefits on labor supply. For example, one of my directors runs a petroleum wholesaling business in West Virginia, where they hire a lot of drivers to shuttle diesel fuel to Marcellus Shale drilling sites in West Virginia and Pennsylvania. He says that his human resources director is about to tear her hair out. The company was getting a fair number of applicants after the special unemployment benefits expired, but, after they were reinstated, people started turning down her offers and saying they'll get in touch when their benefits run out again. As a result, they've actually had to turn down some contracts. To me, this suggests we should temper our expectations for payroll employment growth as long as these extended benefits are in place.

In manufacturing at the national level, we've seen robust growth over the first half of the year. While the national and regional purchasing manager types of indexes have come off their recent highs, they generally remain in positive territory. For our District, for example, the composite index for manufacturing was 16, well into the positive territory, for shipments it was 22, and for new orders it was 13. Interestingly, for the number of employees it was 15, up substantially from recent months. The service sector index ticked up to 10, although retail indexes remained flat.

A contact of ours in the retail commercial property field reports improving property sales and says he was pleased to close recently on a large syndicated credit facility, which is consistent with some other reports of credit placements recently. He says vacancy rates are lower now in their properties and that retail failures have pretty much run their course, although he cites a host of factors that are keeping retailers from committing to new capital expenditures. A director involved in the residential real estate market in the suburban Washington, D.C., area in Maryland reports that buyers are sitting on the sidelines waiting for the next home purchase tax initiative program, which suggests the possibility of some latent strengthened housing demand that we're

not measuring. I should qualify this by mentioning that we've had trouble confirming this report elsewhere in our District, however. So it could be that the people around Washington, D.C., know something that makes this strategy especially attractive.

Here's a sign of the times. The CEO of one of the largest peanut companies in the United States reports that sales of cocktail peanuts are down, but peanut butter is up. [Laughter] Overall, then, I'd characterize the anecdotal reports from our District as still mixed.

Inflation is one area where the NIPA revisions have been favorable. Both overall and core PCE inflation are now about  $\frac{1}{4}$  percentage point higher year over year, and the Tealbook forecast carries that higher pace through to year-end. Moreover, as some others have noted, expectations measures declined a little bit, but they are within recent ranges. My personal view is that we're not anywhere near a sustained deflation right now.

I think it's striking that there has been so much commentary about the extent to which uncertainty is dampening spending commitments, particularly by businesses. We've been hearing these anecdotal reports going back to the beginning of the year about a litany of looming policy initiatives that make business planning difficult. And you know the list—health care, financial reform, the tax code, and the like. I was inclined to discount these complaints at first because of the obvious partisan agendas they might reflect, not to mention just plain whining, and because the future path of economic conditions can be genuinely more difficult to forecast at this part of the business cycle. So uncertainty is bound to be large at a time like this.

But the persistence and pervasiveness of these reports have me taking them a bit more seriously. I think these are factors that could plausibly be restraining growth. From a business point of view, it's essentially a fundamental growth issue, even if some of them represent policy. From our point of view, they're not policies we control, so they're essentially fundamental

factors affecting economic growth prospects, and, to echo the spirit of President Fisher's remarks, they seem to be to be likely to be relatively impervious to a change in the cost of credit of, say, another 20 basis points. But, looking on the bright side, while overall uncertainty may be elevated, at least we know where LeBron James is going to play basketball.

MS. PIANALTO. And it's not Cleveland. [Laughter]

MR. LACKER. Finally, I want to comment on the impressive rally in U.S. Treasuries over the last several months—for example, the 10-year note has come down 1 percentage point and is well under 3 percent now. I think this ought to factor in to how we think about the stance of monetary policy. In particular, I think this indicates that the stance of our monetary policy has eased substantially in the intermeeting period. Consider normal economic circumstances: When we're away from the zero bound, if the demand for money were to shift, and we were not to offset that decline in the demand for money, and the federal funds rate and other interest rates fell, we would judge that to be easier monetary policy. That's why we direct the Desk to hold the federal funds rate constant.

The staff has been encouraging us for more than a year now to think of quantitative easing as having its effect via interest rates, like the 2-year, 5-year, 10-year rates, and so on. What we've seen is a broad shift in demand; that is, economic conditions have changed in a way that has shifted the demand away from the shorter-term and more liquid assets towards longer-term and less liquid assets. And we have not offset that by commensurately reducing the assets in our portfolio in a way that keeps longer-term interest rates—which is how the staff has been telling us to measure the effect of quantitative easing—from falling.

So I conclude that, relative to that benchmark, policy has eased since the last meeting. And notice that, in the fed funds rate example, it doesn't depend on why the demand for money

has shifted. We would say that policy is easier if we let interest rates go down when the demand for money shifts.

Now, it's true that the fall in mortgage rates has increased prepayment speeds, and that has reduced our MBS holdings more rapidly than we had expected. But that hasn't added enough to the public's holdings of longer-term assets to offset fully the increased demand for those longer-term assets. In essence, the demand for duration has gone up, and we haven't offset it with an increase in the supply of duration that we took off the market in order to stimulate the economy. I mention that because, obviously, we're going to be focusing on whether further stimulus is warranted today, and I'd argue we've provided a lot of further stimulus already. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Earlier we had concerns that our policy was insufficiently conditional. I guess what this shows is that the markets are appropriately understanding that our expectations are conditional on developments. So I take that as a good sign, namely, that a weakening in the economy would lead markets to expect more accommodative policy.

MR. LACKER. Right. In the fed funds example, if that represents expectations, then we have this choice about the extent to which to follow through. I think that's facing us now.

CHAIRMAN BERNANKE. Could I inquire further about the peanut indicator?

[Laughter] What was the implication of the cocktail versus the—

MR. LACKER. Well, cocktail peanuts are sort of a high-end good, you know, and they've fallen in the recession.

CHAIRMAN BERNANKE. I see.

MR. LACKER. But people are eating more peanut butter.

MR. WARSH. I took that just to mean there were a lot of mixed nuts hanging around you. [Laughter]

CHAIRMAN BERNANKE. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. All summer long we have had a fairly steady drumbeat of disappointing economic news. Consumer spending and sentiment have soured, and the housing and labor markets continue to struggle. Like the Tealbook, I have substantially marked down my forecast for real GDP growth over the next few quarters and foresee an even bleaker path for the unemployment rate. The downshift in my outlook in part mirrors the greater caution and even pessimism that I hear from my business contacts. A few months ago they were debating whether the recovery was more likely to be U-shaped or V-shaped. Now they worry about a W-shaped outcome—a double-dip recession.

My own view is that a double-dip recession with negative GDP growth is very unlikely. To me, a more relevant benchmark is whether growth during the next few quarters will fall below potential. Such a shortfall could signal that the recovery is too anemic to sustain itself on an ongoing basis. A self-sustaining recovery crucially depends on the private sector stepping up as the impetus to growth from the fiscal stimulus and inventory dynamics ends.

The accommodative stance of monetary policy is providing considerable support to private sector spending. Nonetheless, that stimulus may ultimately prove insufficient to overcome a daunting list of headwinds, including tight credit, impaired household balance sheets, a housing overhang, state and local budget crises, and heightened uncertainty. A number of people around the table this morning have commented on this heightened uncertainty, and it is a factor slowing the recovery that many of my own business contacts also constantly stress.

Of course, the business environment is always fraught with uncertainty to some degree. But, as you noted in your congressional testimony, Mr. Chairman, the outlook now seems unusually uncertain. This matters importantly to the outlook for a reason you articulated in your Ph.D. thesis, namely, that it induces businesses and consumers to defer commitments to long-lived investments, whether in plant and equipment, the workforce, or durable consumer goods. This logic is leading many of my business contacts to postpone new projects, to defer hiring, and to build up cash reserves. They are simply too uncertain about whether the recovery will gain traction. One national survey of small business owners reported that 75 percent believe that the economy is likely to slip into another recession before it fully recovers. And consumers may also be postponing purchases of big-ticket durables, such as cars, due to an amplified sense of job and income insecurity. So my outlook, like yours, Mr. Chairman, is unusually uncertain.

The recent slowing in spending may simply represent a temporary cooling off, but it may presage something more ominous, like the weaker recovery scenario in the Tealbook. Various statistical factor forecasting models that my staff tracks all started flashing red during the intermeeting period and now project economic growth well below potential for the rest of this year. However, even if the probabilities associated with upside and downside forecast scenarios were evenly balanced, the costs associated with these outcomes are most definitely not. Continued weak growth would be a very grim scenario, given the constrained set of options available for further monetary and fiscal stimulus. I worry that growth below potential and a deteriorating jobs outlook could trigger adverse feedbacks on consumer and business confidence, further stunting the economy's forward momentum.

Turning briefly to inflation, I think the past two years have been quite kind to the view that the extent of slack in the economy helps predict disinflation. The unemployment rate

reached 6 percent in the middle of 2008, and since then core PCE and CPI inflation have fallen by 1¼ and 1½ percentage points, respectively. I don't find such disinflation surprising, given the stories about downward wage pressure that I hear. One manufacturing executive recently described the swarm of job applicants who showed up for a single warehouse opening. That prompted his company to drop the position's base wage by 15 percent. At the same time, we see no evidence that the doubling of our balance sheet has triggered any rise in inflation expectations and inflation. The latest inflation data indicate that weakness in prices remains widespread among both goods and services. It is more pronounced in market-based prices than in imputed prices. Based on the apparent stability of inflation expectations, the Tealbook projects that inflation will stop falling and hold steady at about 1 percent for the next few years.

I, too, hope that the long disinflationary trend of the past two years will end, and I think a further disinflation seems unlikely. However, the evidence suggests that prices and wages react with a considerable lag to shifts in output and employment, and Japan provides a useful cautionary example. Japan's deflation didn't begin until the mid-1990s, a half-decade after the collapse of Japanese real estate and equity prices. Furthermore, during the early years of deflation, Japanese long-run inflation expectations remained well anchored, averaging about 1½ percent as measured by consensus forecasts. So, unfortunately, a Japan-style deflation remains a relevant worst-case scenario for us going forward.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. First, let me thank President Lacker for educating us on the peanut market. I have often maintained that if there's such a thing as reincarnation, I'd like to be reincarnated as a Smithfield pig—you have a very short life, but you get to eat peanuts the entire time.

Many around the table have already summarized the situation we seem to be in, with momentum slowing, economic growth decelerating as we come out of the recession, and the uncertainty and caution that seem to have increased and that affect both consumer and business spending. I agree with these summaries, particularly President Plosser's excellent survey, indicating that the outlook remains one of very modest but continuing economic growth and slow private job creation.

What I'd like to do with my time is devote my comments to some of the anecdotal input we're getting from our region. It helps me, at least, assess the nature of the problem we're dealing with and the slowdown we're seeing, and it gives a little bit of texture. It also helps me supplement the lag and the revisions that we see in the data, which could be problematic if we're dealing with quickly changing circumstances.

The sentiment of our directors and other business contacts is a little more downbeat than it was a few weeks ago. Orders have leveled off across a range of industries, and expectations for growth for the coming six months have shifted from increasing to flat. Interestingly, the transportation sector remains very strong, and the interpretation we are hearing is that businesses are attempting to manage their strong aversion to holding inventories with more frequent shipments and more just-in-time kind of activity. In some instances, transportation surcharges have been levied, and there's growing concern that transportation bottlenecks could become a serious problem if additional capacity in the industry isn't brought online. Elsewhere, capacity problems do not appear to be an issue, and firms see pricing power as very limited. The demand for new capital goods remains primarily limited to the replacement of worn-out equipment, upgrades to computers and software, and certain other labor- and energy-saving technologies. One director said that the decision to replace occurs when the duct tape starts to fall off.

Otherwise, plans for capital expansion, aside from the transportation sector, appear to us to be almost nonexistent.

Labor markets in the District are soft. Firms are still exceptionally resistant to bringing on permanent hires. One major employer in the District has turned to relabeling their temp workers as a “contingent workforce,” an indication that firms may view their relationship with temporary workers as a more permanent arrangement.

Housing markets have deteriorated a little in the District, and we anticipate that the inventory of unsold homes will grow as some of the governmental loss-mitigation programs wind down. Substantial downward pressure on home prices is not assumed in my baseline forecast, but it is a bigger risk factor today than it was at the last FOMC meeting.

At the last meeting, I gave you some sense of the oil spill impacts, and I’ll do that probably at this meeting, but only at this meeting. Again, it’s the best news I’ve had—no oil has flowed into the Gulf for almost four weeks. Efforts to seal the well permanently appear to have worked, so very little crude can be found at sea, and there are no reports of crude on any of the Gulf beaches. Of course, the long-term ecological impact isn’t known. But, in terms of economic damage caused by the spill, the worst appears to be behind us. Interestingly, one of our directors, who represents a large home improvement retailer, said that just after the well was capped they had one of their strongest weekends of sales. That suggests that there is a connection between these kinds of generic bad news events and consumer attitudes. Losses experienced in the Gulf Coast tourist areas appear to be largely offset by gains elsewhere in the southeast. So my contacts along Florida’s east coast reported increases in activity, as well as in lake and mountain destinations in the Sixth District.

Because we haven't seen disruptions in the energy or transportation sectors from the oil spill, and because of the limited size of the affected Gulf economic footprint, we do not see the oil spill having a significant impact on the national outlook. I should mention, however, that the effect of the deepwater drilling moratorium remains a major uncertainty on a regional basis, and there will likely be jobs lost in this sector. But, again, the long-term effect on U.S. energy production does not appear to be significant.

My outlook really hasn't changed a great deal. Our directors essentially advise, "Don't panic, and stay the course." They are not overreacting, as line businesspeople, to what they are seeing in the way of a slowdown.

Turning to the banking sector, credit demand remains quite weak. Large firms seem capable of funding their limited demand for new capital expenditure out of cash. Small business lending has picked up a little, according to one source that specializes in small business surveys. But, generally, there's a view that credit remains constrained for all but the strongest borrowers. I would say, however, that the results of our July small business credit survey indicates that, of the 37 percent of the small businesses that reported seeking credit in the last quarter, more than half—60 percent—had their financing needs met substantially or in full, and only 15 percent were unable to secure requested credit. I do think that the picture around small business credit availability is a mixed and confusing one. It's hard to get to the underlying reality.

Regarding the balance of risks, like President Pianalto, I think the incoming numbers are not much off the path that I would expect, but I'm very much aware that the consensus outlook has deteriorated further and may have stepped a little closer to an unwanted deflationary scenario. While I don't think that's likely, I still judge the balance of risks to be a bit more to the downside. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. In this go-around, I'd like to expand my remarks a bit, but I will speak more briefly in the policy go-around.

I want to turn from some of the short-run data and projections that we all bring to this table and talk about some of the longer-run considerations that I think we need to be very careful about. I understand that we can look at data from different perspectives and reach different conclusions. So, while I offer these comments with some conviction, I also do so with humility, because no one can predict the future, and because the past isn't necessarily an indicator of the future itself.

I hear some familiar themes as I listen to the discussion around this table and the discussions in the media and among the market experts, and here are some of them: We're in the era of new "normal" in which we'll have high unemployment and low income growth, and therefore, interest rates must remain at zero indefinitely; deflation is a serious threat, something to be avoided at nearly all costs; I read in the *Wall Street Journal* that today's meeting will focus on the need for the Fed to do more, including the purchase of long-term securities; and I'm told that we could be entering the next depression as the economy fails to gain traction.

I agree that the economic conditions are far from what any of us want—certainly we want a stronger recovery. But what are the long-term implications of doing more, or even of maintaining the current level of monetary stimulus? Can we actually improve the economy faster by keeping rates at zero, or are we perhaps adding to the uncertainty by taking actions that are, in my opinion, unsustainable in the intermediate and long run? Are we, in fact, damaging the long-run economy, as our last experiment with low rates, in my opinion, might have done? I

think one can make a good case, using the same data, to show that we need to change our stance on policy.

In one sense, I think it's interesting that some members of the FOMC and others are constantly in fear of deflation. I would point out that the consumer price index was a mere 18 in 1945, 172 at the start of this millennium, and today is at 219, and not once during that period have we had a sustained decline in prices.

In setting forth my case further, let me make some specific points. First, I would note that the recovery is proceeding as outlined earlier this year by many. It's a modest recovery with mixed results that is likely to continue with a growth rate of somewhere around 3 percent or, perhaps, a little less going forward. Month-to-month data are mixed—some positive, some negative—as is typical in recoveries. For example, industrial production was negative 0.3 in April, plus 1.3 in May, and plus 0.1 in June, and orders for nondefense capital goods, excluding aircraft, were roughly minus 3 percent in April but almost 5 percent to the positive in May, and positive 6 percent in June; factory orders were up slightly in April, down in May, down again in June; durable goods orders were down in June after increasing almost 3 percent in April, and corporate profits have been increasing consistently month to month. While monthly data have been mixed, as this demonstrates, the trend data have been consistently positive. Private job growth has been less than hoped for, perhaps, but, importantly, it has been positive. Private payrolls have increased by 630,000 since January 1. This is a better pace of recovery than we saw at this point in the prior two recoveries; admittedly, we went deeper this time. Regarding labor, in the first half of the year we saw increases in all of the components of labor income: hours worked, employment, and wages. Hours worked have risen more rapidly than employment, which is typical for the early stages of an economic recovery. Personal income

growth is at 2.3 percent since the second quarter of 2009. Consumption is up 1.6 percent since the second quarter. Investment is up almost 15 percent. Industrial production is up more than 8 percent year over year. High-tech production is up 20 percent. Corporate profits are up 57 percent since the fourth quarter of 2008. Housing is up by 0.3 percent and, I hope, stabilizing. My point is that the economy is recovering, and, barring specific shocks and bad policy, it should continue to grow over the next several quarters.

My second point is that the financial and economic shocks we've experienced did not just come out of nowhere. They followed years of low interest rates, high and increasing leverage, and overly lax financial supervision, as prescribed by both Democratic and Republican administrations. In judging how we approach this recovery, it seems to me that we're repeating the same policy patterns that followed the recessions of 1990–1991, and 2001; because of the uncertainty of the strength of the recovery and our intense desire to avoid a recession, we are in danger of leaving rates too low too long and of allowing supervision to be more lax than we had originally intended, as witnessed by recent Basel capital agreements.

Here are some other facts I'd like to share about the period from 1991 to 2008. The real fed funds rate averaged 1.6 percent from 1991 to 1995, 0.37 percent from 2001 to 2005, and minus 1 percent from 2008 to the present, hardly a tight monetary policy environment. Gross federal debt increased from 60 percent of nominal GDP to 75 percent. Consumer debt increased from 62 percent to almost 100 percent of nominal GDP. Nonfinancial debt increased from about 186 percent of GDP at the start of the decade to 225 percent by December of 2008. Between 1993 and 2007, the average leverage of the 20 largest financial institutions of the United States—total assets to tangible equity capital—increased from 18 to more than 25 and reached a high of 31. We increased our debt to the rest of the world dramatically, as well, from about 5 percent to

25 percent of nominal GDP. The effects of these trends in our economy, encouraged by what I think is accommodative policy, have been significant and stressful. They will not be overcome quickly, and the continued use of zero interest rate will only add the risk to the longer-run outlook.

My third point is that, with a clear policy path towards less highly accommodative policy, financial deleveraging will, or should, evolve slowly, and many of the remaining economic imbalances will rebalance. Under such circumstances, the economy will expand at a sustainable moderate pace with similar, that is, moderate, job growth. There may be other ways to accelerate GDP growth, but it's not through highly expansionary monetary policy.

Let's talk about the consumer. Consumption as a percent of GDP for decades was around 63 percent. During the strong boom period, it was nearly 70 percent. Consumption most likely will return to historical levels, which are also, perhaps, more sustainable. Thus, the consumer will contribute to growth but is unlikely to be part of its intensification. To provide another perspective, personal saving declined from nearly 10 percent of disposable income in 1985 to less than 2 percent in 2007. It's now closer to 6 percent—better in many ways, but still below historic norms. Assuming it stabilizes where it is and personal income grows as it has so far, then it will be, I think, a positive factor in the economy's growth, but not a factor that causes it to accelerate.

Now to businesses. Profits are improving. Balance sheets for the nonfinancial sector are rebalancing and strengthening and seem able to support investment growth as confidence rebuilds. Although credit supply and demand may be an issue impeding the recovery to some extent, a shortage of monetary stimulus is not the issue.

Federal government deficits, state government debt burdens, and uncertain tax programs surely are risks to recovery, and increased business uncertainty will inhibit the recovery in important ways, but they are not new to the U.S. and, by themselves, should not cause a double-dip recession unless they go unaddressed.

If, in an attempt to bring fuel to this recovery, a zero rate of interest is continued, it's likely to bring its own unintended consequences and add its own source of uncertainty. The zero policy rate during a crisis is understandable, but a zero rate after a year of recovery actually gives legitimacy to questions about the sustainability of the recovery. It feeds the alarmists, and it breeds uncertainty and fear.

Fourth, the media and markets should not be so influential. When mixed data are reported as systematically negative results and the more positive long-run trends fail to be acknowledged, it's an invitation to hasty action. The Committee must be careful not to get caught up in that moment and must, instead, look to the long run. I will note that, in its first year, this recovery saw GDP growth average about 3.2 percent. The GDP growth rate of the 1991 recovery was 2.6 percent, and for the 2001 recovery, it was 1.92 percent. Now, this has been a deeper recession, of course.

I have one final reminder. I went back and looked at news files and other comments from the spring and summer of 2003, just before the federal funds rate was lowered to 1 percent, where it remained until 2004. Let me give you just a few samples of what I found. One person noted that the Federal Reserve Board recently warned that America faces a risk of deflation; Japan has been suffering from it for more than a decade; Europe may be heading toward it; the entire world economy could succumb to it; this could be the first round in a deflationary cycle. More examples: The Commerce Department reports orders of U.S. factory supplies down

2.9 percent in April from March, the largest decline in 17 months; with fewer jobs and stagnant wages, Americans won't be able to buy enough to keep the economy going. I'll stop with this last one: On the surface, one can make the case that the Fed doesn't have to do anything at all, because interest rates are incredibly low; still, the Fed will not sit on its hands—its motivation is to avoid deflation; another rate cut, even of ½ percentage point, doesn't guarantee that there won't be an economic collapse, but it makes that collapse less likely, and, hence, we get the notion of a rate cut as insurance policy—as insurance, a rate cut is pretty cheap, it says; lower rates aren't going to trigger a burst of inflation, and if they did give the economy an extra boost, well, who's going to complain about that? The following quarter, real GDP expanded at an annual rate of nearly 7 percent, and still rates were left at 1 percent until credit began to expand significantly, and until the stage was set for one of, if I may say, the worst economic events since the Great Depression.

My view, Mr. Chairman, is that it was one very expensive insurance premium. Unemployment today is 9½ percent. I think that, had we been more patient during that deflationary discussion, had we not lowered the rate to 1 percent, perhaps, and kept it there, we would have been far better today. Now, I fully acknowledge that I was on the Committee at that time, but I certainly feel I learned some lessons from that experience. Therefore, I once again suggest that the recent financial crisis and recession were not caused by high interest rates but by rates that were left low for a considerable period. As a Committee, the FOMC chose that short-run need over some of the longer-run risk that we again face. I think the Great Depression of the 1930s was a traumatic event. I agree that we need to be aware of its lessons, and we need to avoid its mistakes. But in doing so, let's not forget other lessons. We will not and should not

double our reserve requirements as we did then, and, more recently, the great inflation of the 1970s should be remembered and, of course, the crisis of 2008. Thank you.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. I would say that the economic recovery in the Ninth District seems to be on a slightly stronger footing than in the rest of the country. Business contacts report that 2010 is a strong year that is making up much, although not all, of the considerable ground lost in 2009. Sales slipped back some in May and June after strong showings in March and April but have picked up again in July. Overall, there are few reports of input price pressures. Businesses do report being leery about making permanent hires because of concerns about future high taxes and other forms of policy uncertainty.

The labor market situation in the Ninth District is still far from desirable but is looking better than the nation as a whole. Minnesota has more than half the population in the District and the employment rate there peaked at 8.4 percent in June of 2009. One year later it has come down to 6.8 percent, nearly halfway back to the December 2007 level of 4.7 percent.

Unemployment in the Dakotas is low, at below 5 percent, and, indeed, in both states there are complaints of severe labor shortages. It is true that unemployment continues to drift upward in Montana. It now stands at 7.9 percent and has been rising continuously since early 2007, and labor conditions are still troubled in the Upper Peninsula of Michigan. Nonetheless, I think the overall picture of the economy as a whole, and the labor market in particular, is considerably better than in much of the rest of the country.

Let me turn to the national picture, and here I'll focus my remarks on three variables that have affected my thinking about policy: output, unemployment, and inflation. Real GDP grew in the second quarter of 2010, but only at an annual rate of 2.4 percent, according to the first

estimate from the BEA. The BEA also revised real GDP downward from previous periods. So real output fell by just over 4 percent over 2008 and the first half of 2009. In the past year—the second half of 2009 and the first half of 2010—it has risen by 3.2 percent. Per capita GDP has declined by close to 3½ percent since the fourth quarter of 2007, and it's still more than 7 percent below trend compared to that date. So, in this sense, while we have had a recovery, as President Hoenig has emphasized, we have to say that it has been a modest one.

Unemployment remains high at 9½ percent. In the past, I ascribed this slow decline in unemployment to credit market conditions for small businesses and uncertainties related to taxes and regulations, and those might well be factors that are important. Nonetheless, I've been taking a fresh look at recent historical data from the Job Openings and Labor Turnover Survey, and I've been forced to reevaluate my thinking. Tight credit and/or concerns about taxes and regulations will presumably lead firms to post a relatively small number of vacancies and/or fire a large number of workers, but they are doing the opposite. From July 2009 to May 2010, job openings have increased by more than 25 percent. From July 2009 to May 2010, layoffs and discharges fell by 25 percent. During this same period, the unemployment rate has actually risen. I think these numbers may have important consequences for how we think about policy. Monetary policy works to reduce unemployment by lowering the incentives of firms to fire and increasing the incentives of firms to hire. Yet firms are laying off many fewer workers and are posting many more openings. Nonetheless, unemployment has not gone down appreciably, if at all.

My tentative conclusion is that the labor market is beset by an unusually severe form of mismatch. Firms have jobs but can't find appropriate workers. The workers want to work but can't find appropriate jobs. This mismatch may not be amenable to monetary policy actions.

The Fed can do many things, but it cannot readily transform a construction worker into a nurse. [Laughter] How much of current unemployment is due to mismatch? The job openings rate has risen to 2.4 percent and the layoff/discharge rate is down around 1.3 percent. These figures are roughly similar to what they were in the fourth quarter of 2003. The job openings rate was a little higher back then, about 2.7 percent. But in the fourth quarter of 2003, the unemployment rate was close to 6 percent, not 9½ percent. To me, this obviously very rough comparison indicates that as much as 3 to 3½ percentage points of recurring unemployment represents mismatch that is unlikely to respond to additional monetary stimulus.

I would add to some of the factors President Lacker mentioned about the extension of benefits. I think there are reasons to be suspicious of that story; for example, if you look at unemployment rates for new entrants, they also seem to be highly elevated.

Let me turn to inflation. It has drifted downward. In the past six months, both core and total PCE have averaged slightly above 1 percent. In the preceding two years, 2008 and 2009, they both averaged between 1½ percent and 2 percent. As many around the table have noted, I don't find these numbers intrinsically alarming, as I don't view inflation of about 1 percent as being so low as to be inconsistent with our price stability mandate. Likewise, Blue Chip forecasts, our own Minneapolis model, and the readings from TIPS bonds are all predicting reflation in 2011. Nonetheless, an extended period of time at our effective zero lower bound may lead to a significant decline in inflationary expectations, and I think that this is another longer-run concern to add to the ones that President Hoenig just mentioned. If we keep the fed funds rate at near zero for a long time and economic growth prospects push up the real rate to be positive, we will eventually have deflationary expectations and persistent deflation. We should, I believe, engage in significant contingency planning to ensure that this outcome does not occur. I

think this is an accurate description of what's going on in Japan. Unfortunately, I don't believe that asset purchases will be effective in this regard, but I'll wait to say more about this later.

Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. After reviewing the recent data and insights from my business contacts, I still believe the U.S. economic recovery is continuing, but the near-term and medium-term economic growth prospects seem very modest. Yes, I can recount several positives from my business reports. Revenues at heavy equipment manufacturers, Deere and Caterpillar, have risen sharply on the strength of foreign demand, especially from emerging markets. Manufacturing segments with exposures to the auto sector have also rebounded well, although overall sales and production levels are well below previous business cycle peaks. Corporate America is flying more business travelers overseas again to support strong activity, and the European financial crisis continues to recede. Indeed, Europe's growth prospects have not cratered as I had feared.

But there are clear signs of heightened uncertainty and waning momentum in the U.S. One manufacturing supplier with a broad business base described how non-auto-related customers were pulling back in the last two months. This is especially evident in those products related to cap-ex that they believe are early indicators of trend shifts. With the continuing corporate emphasis on productivity gains, businesses are quick to mention that the hurdle for meaningful hiring is very high. As one CEO stated, "While firms might increase hours, hiring new workers is just a totally different proposition."

In my directors' phone call last week, the mood was grim. One of our great hopes is for banks to begin lending out their vast reserves to fund growing activity, but all I hear from

bankers is that businesses and consumers are pulling back on their activities. My large bank director complained that the psychology of the general economy is poor. Consequently, it doesn't seem that increased bank lending is going to happen any time soon. Similarly, although the big temporary employment firms headquartered in our District report that their business has held up fairly well, they say that client firms are increasingly cautious about the uncertain economic outlook. Another CEO put it this way: "It all comes back to jobs."

In light of these developments, I have no substantial disagreements regarding the outlook presented in the Tealbook. With each passing meeting, it is becoming all too clear that the modest pace of economic recovery will be too slow to return the labor market to anything close to normalcy by 2012. With the unemployment rate projected to be 7½ to 8 percent in 2012, we're falling far short of our objectives for the real economy. Remember, this is the third anniversary of when this all began, this very meeting—we'll be five years on in 2012.

I recognize that there are caveats. Some unemployment is likely structural and requires costly reallocation across industries, skills, and regions. This reallocation may be particularly important for sectors like housing, which grew to unsustainable levels. Associated capital reallocation could lower overall potential output. Still, these structural factors seem relatively small compared with the current level of unemployment.

The other disturbing policy development is that we are underrunning our inflation objective. Mr. Chairman, on this subject the Committee is in a difficult situation, because we do not have a uniform view on an explicit numerical inflation objective. That has been already voiced this morning. Nevertheless, by my reckoning, with the Tealbook's core PCE inflation projection of 1 percent in 2012, we're failing by a full percentage point; that is, I have 2 percent as my price stability goal. If an inflation rate of 1 percent is not a problem, as some have

indicated, then, by symmetry, we should feel the same way about an inflation rate of 3 percent. I somehow doubt that that's the case.

We're failing on both dimensions of the dual mandate. We face both unemployment that is too high and inflation that is too low. This is not a new development due to recent weak data—that's my assessment. It's a growing realization of the dilemma we face, in my opinion. The state of affairs should focus us squarely on what more we can do to stimulate demand. For me, given the lack of conflict between our dual objectives, it's hard to see why we wouldn't want to take some significant and meaningful additional measures. But I'll hold off saying more until the policy go-round. Thank you.

CHAIRMAN BERNANKE. Thank you. It's a little after 10:15 a.m. I understand coffee is ready. Let's take a 20 minute break.

[Coffee break]

CHAIRMAN BERNANKE. Let's recommence with the Vice Chairman.

VICE CHAIRMAN DUDLEY. Thank you, Mr. Chairman. I thought the first round today was interesting. It seems that people mostly agree on where we are, but there's quite a bit of disagreement about what we should do about it and how effective those actions would be in shaping the outlook. In general, I think I'm pretty close to many others. The economy has hit a soft patch. That does increase the economy's vulnerability to adverse shocks. This has mainly come about because the benefits of inventory restocking have petered out, while, at the same time, the household deleveraging process probably has not yet been completed. My expectation is that economic growth will be quite slow for the next couple of quarters and then will pick up steam next year.

On balance, my level of anxiety about the outlook is up only slightly from the last meeting, but it was relatively elevated then, so I don't take much comfort from that. On the one hand, the evidence of slowing is more pervasive, both in consumer spending and in housing, and private sector payroll growth remains anemic. But, on the other hand, there were some more positive developments. In particular, the risks from Europe appear to have diminished somewhat, as growth has been firmer than expected, and the bank stress test, while not ideal, has taken place and has been more reassuring than disturbing. Also, as noted, financial conditions in the United States have eased since the last meeting, with equities recovering a bit, the dollar weakening, and long-term interest rates having fallen.

In general, while I think there's some risk of a double dip, I'd still see that risk as quite low. After all, policy remains accommodative, financial conditions have eased, and credit availability is starting to improve. Growth abroad remains solid, and the cyclical parts of the U.S. economy that could conceivably contribute to such a downturn, such as housing and autos, remain at depressed levels, well below their long-term trends. I think this is an important point in assessing the risks of the double dip—in other words, to consider what sectors could turn down and cause the double dip to take place. Moreover, the revisions to the NIPA data indicate that the household deleveraging process may be more advanced than we previously thought, as consumer spending during the recession was revised downward and disposable income growth was revised upward. So there was a pretty substantial upward revision to the household saving rate, which is now about 6 percent.

Despite all of this, I have now moved to thinking that we should try to do more in terms of providing support to economic activity. Several factors lead me to this position. First, it's going to take a long time—years, not months—to get back to our objective of full employment.

So it's hard for me to justify sitting here and not using our policy tools as aggressively as we can. Second, we are in a vulnerable period, during which an unexpected shock could push the economy from a slow-growth path into a recession. Third, anything short of solid economic growth raises concerns about the risk of deflation. With inflation so low already, even modest further downward pressure on inflation could make this a real risk. In my view, it's better to take out some insurance now to reduce that risk than to wait and hope. Fourth, our current policy is one in which the weaker the economy is, and the lower longer-term interest rates are, the faster we're shrinking our balance sheet, which is increasing the amount of duration that has to be held by the private sector. This seems a bit perverse, to me, in an environment in which the economy is weaker than desired to start with. At a minimum, offsetting the shrinkage of our balance sheet by reinvesting maturing agency debt and agency MBS would seem appropriate in order to keep the policy setting from automatically moving in a tightening direction as the economy weakens. But that is drifting into the monetary policy discussion, so, I'll say more on that later.

CHAIRMAN BERNANKE. Oh, I'm sorry. I thought we were going to keep drifting.

[Laughter] Governor Kohn.

MR. KOHN. Drifting over to Governor Kohn. Thank you. As many have remarked, the incoming data have suggested a flatter trajectory for the economic recovery than most of us had anticipated. A key question over the past year is why the economy hasn't responded more vigorously to the very accommodative monetary policy and fiscal policy. Our answer has been that spenders have faced a number of restraining forces—headwinds—that are expected to abate gradually, producing faster economic growth down the road when the effects of those really low interest rates begin to take over.

I think we have had mixed evidence on the strength of the headwinds over recent months. There has been some positive news, as many have remarked. First, credit restraints do appear to be abating. For large businesses with access to credit markets, as President Fisher and others have remarked, there really is no restraint on how much money they can raise, and large and small businesses are sitting on piles of cash, in any case. In recent months, there has even been a decline in risk premiums and in volatility, although they're not back to where they were in April, so there's still a net tightening since the spring. Yesterday's briefing noted some life in the CMBS and leveraged loan markets, and the Senior Loan Officer Survey suggests that banks are starting to compete more for loans and that credit is beginning to become more available, even for small businesses, although it's still quite tight. Second, the headwind from wealth effects seems to be abating some. Home prices have been flat, and staff has removed its projected further decline in home prices. Taking flat house prices with the rise in equity markets over the past year or so suggests that the negative effects on household spending from earlier declines in wealth should also be abating. Third, as many have remarked, it does not appear that Europe will be quite the drag on global growth that we feared it might be. And rising commodity prices suggest global growth generally is holding up, despite concerns about China. Finally, the dollar has reversed most of its gain over the spring, reducing the negative effects of dollar appreciation on prices, that is, driving down prices and demand for output.

Unfortunately, these positive trends have been more than offset by indicators that other headwinds have been stronger and more persistent than expected, and the net result has been the marking down of growth, both past and future. In particular, the desires of households to build wealth and repair balance sheets appear to have been stronger than estimated. And, therefore, we've seen downward revisions to consumption, despite upward revisions to income. As the

staff suggests, these revisions could mean more of the balance sheet repair is behind us, so spending will pick up faster and sooner, and the saving rate will begin to drop in the future. But it also might mean significant upward revisions to targeted net worth and what is perceived to be a more uncertain and riskier environment, causing the saving rate to persist at higher levels or even increase further. I think the staff's approach of essentially cutting through this difference and projecting that consumption will grow in line with disposable income is a reasonable way to proceed until we find out differently.

Although underlying trends in housing markets are difficult to read through the veil of the various tax incentives and other effects, it does appear that household caution and concerns about job prospects have held down the demand for housing despite rising affordability as interest rates decline. Construction of new houses is extraordinarily low, but vacancy rates are stubbornly high, which suggests to me that the excess supply of houses will take longer to work off than I, at least, had previously anticipated, damping residential construction.

Moreover, the adverse feedback loop between the weak labor market and consumer confidence appears to have been reestablished in recent months. Despite the apparent slowdown in productivity growth, payroll growth has been quite damped, as businesses raise hours, not head count. And it's the head count that matters for people who are losing or worried about losing their jobs.

Uncertainties about sales, as well as the regulatory environment, are feeding back on business demands. A substantial drop in the payrolls of state and local governments suggests that their activity will be a drag on growth for quite a while, as well, and, perhaps, by more than in the Tealbook. I think the state and local sector is going to be a net negative for quite some time.

Eventually, these headwinds will also abate, and I'm sticking with my forecast that economic growth picks up in 2011 and 2012, as they do abate. I include in that forecast the expectation that less rapid growth in productivity will feed back on employment and consumer confidence and that and we'll have some uptick in both consumption and consumer confidence. But it is apparent that the trajectory of the recovery is flatter—it will take longer than anticipated—and, in the meantime, we're living with higher levels of unemployment than expected. I think it's notable that, in March and April, I thought we were in kind of a positive feedback. Remember? We were getting a lot of positive surprises, and my memory is that I was sort of sitting on my forecast then, because I thought we might be in a positive feedback loop. But that turned around on us through the spring, and it's not entirely clear why. I think Europe is a big part of the reason. But it does suggest to me that there are downside risks to the recovery, and it's going to be hard to get into a persistent positive feedback loop between confidence and consumer and business spending.

Even if the recent slowdown proves more temporary than the staff and I expect, the revisions to GDP confirm what the labor market has suggested, namely, that the recession was deeper than estimated and the output gap was larger. The inflation data reflect that gap: Headline prices have been falling of late, and core inflation has been very damped. Fortunately, on balance, expectations don't seem to be following inflation down, though the TIPS-based measures have come off a little of late, and, as President Bullard and others pointed out, that might be a little warning sign.

In sum, I don't think we're facing a double dip. I don't think we're facing imminent deflation, or even deflation over the longer run. But we are facing a slower climb out of a deeper

hole with inflation tracking well below our objectives. We'll discuss the policy implications to this in the next go-around. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you, Governor Kohn. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. In the intermeeting period, there has been quite a bit of chatter based on economic and financial market developments, and I have been troubled by some of it. Let me take on, if I could, the four points of chatter from folks outside of this building. I will try not to be too critical of them, because Governor Kohn will soon be among them [laughter] trafficking in many of these same things.

The first bit of chatter that I will try to debunk is the outside world's view that the modal forecast for U.S. GDP growth over the longer-term horizon has to be materially lower due to the soft data in the second quarter. I don't think that's right. I don't think that what I've learned in the last six weeks has made me change fundamentally my view of the state of this economy. I have been less optimistic than the Tealbook and remain so, but the story of a sluggish, subpar recovery remains the base case, I think, for almost all of us. So I think we've got to remind ourselves, and maybe remind them, of the difference between a cyclical recovery and a secular growth story. If the second quarter had turned out to be well above trend, that certainly would have been good news for all involved, but it still wouldn't be revealing much about what this economy is capable of doing in terms of longer-term GDP growth or the natural rate of unemployment.

Second, there is an emerging group in the outside world saying that deflation is a growing risk. However, if we look at the path of commodity prices, anchored inflation expectations, a weaker dollar with expectations that that trajectory continues, and upward revisions to many price measures, none of these give evidence signifying that deflation risks are on the horizon. In

addition, I have had a lot of discussions with both price setters and price takers in this intermeeting period—though I’m sure my list is not as robust as President Fisher’s. When I describe to them the risks of deflation, the story I hear back is actually one about disinflation. Then, when we discuss the difference between cyclical disinflation the next couple of years and real deflation risks out over the horizon, they all say—whether they had said there is a deflation problem or not—“Oh, yeah, it does turn out that, ultimately, I will have labor wages going back up; I expect the rest of my input costs to go up.” In sum, I haven’t found an anecdote from any of a large number of business folks that somehow vouches for or sanctifies this deflation risk thesis, which has captured the attention of financial markets. I think we should be leery of, and alert to those out there pushing it for their own purposes.

Third, there seems to be increasing chatter that financial markets are in need of Fed action—the financial markets are waiting for the Fed to act. I disagree with that as well. Financial markets seem to be acting smartly and rationally in response to real economic data. The Tealbook reports that Treasury markets have moved 20 to 40 basis points in light of these incoming data and, of course, in light of expectations about policy. That is a more powerful stimulus than we are contemplating or, frankly, capable of delivering. In addition, financial markets seem to be working with the language we have had on the table and responding appropriately. They have moved out the timing of a change in the federal funds rate, and capital markets more broadly seem to be repairing themselves slowly but surely, not just in the U.S. but in Europe as well.

Fourth, there is chatter, particularly here in Washington, that the Fed is the only game in town—the Fed can’t just sit there, the Fed has to act, because, after all, we have given up on the constructiveness of other policies. I also take significant issue with this growing view. Of

course, the Fed remains powerful in dealing with unexpected shocks, and we have proven our ability and willingness to do so. But we are not likely at this point, in my judgment, to be able to improve GDP growth and employment trends materially by acting alone. We do no service to the public if we overstate our ability to do that. I will say more on this in the policy round.

To give a fair description of economic developments since we last met, let me make four other points, which I think are encouraging. I don't mean to say that there hasn't been some news in the opposite direction, but I want to make sure these get some attention.

First, the credit situation has turned in the United States. I think this is the first meeting since the crisis began where I feel that I can say this. If we look at bank credit, the credit card companies, financial institutions, and actual corporations, I can't help but come to the view that bank credit quality appears much improved—I think that the big drawdown of reserves into earnings by many of our banks is not some gimmick. This improvement in bank credit and credit more generally is a necessary precondition to getting this economy to turn.

Second, the deleveraging of banks, businesses, and consumers has progressed significantly, as evidenced by these excess cash cushions and high saving rates. And if what matters most of all for us is not what the next couple of quarters look like, but what the next few years look like, this is good news. It means that, when the animal spirits turn and policy becomes more growth-oriented, there is plenty of amplitude for a robust recovery.

Third, while I think that Nathan rightly reports that the global trade picture has detracted from near-term measures of the arithmetic of GDP, I also think the fact that global trade is back with force is very good news for the U.S. and very good news for the global economy. We will have some quarters where this will be helping GDP and some where it will be hurting, but, for those like me, who very much feared that the Europe situation could well deteriorate, I have to

kick my stubborn self and say they seem to have gotten through it. Now, I won't say that those tail risks are gone—I'm stubborn enough to believe that they could reemerge in September or October. But I think the global economic and global trade picture is a better one, even a materially better one, compared to when we last evaluated it.

Fourth, the data on the real side have not been uniformly weak. If you look at U.S. multinationals, excluding financial services companies, profits have been robust, and so has revenue growth. If you push beyond what some of these fellows say on their earnings calls, where they are very cautious on the second half, most report that they are still seeing a reasonably strong backlog of orders. They are not sure where it is coming from—Europe looks pretty good. In the United States, particularly in the technology industry, and some others, they are sheepish, but the backlogs and the revenues don't look nearly as bad as the economists in the outside world would have us believe. So that's just for purposes of balance in the discussion in the policy round. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. Let me elaborate a bit more on Governor Warsh's point about credit turning. Banks' credit quality continues to improve, and the recovery in credit is far enough along that bank management and bank analysts are now focused much more on pre-provision net revenue and less on credit costs. But I don't get the sense that the regulatory community has made the same shift in focus, so I'll talk a little bit about real estate loans before addressing the outlook for loan growth.

In residential mortgages, the latest evolution of the government loan modification plan was a new requirement for completion and documentation of the specific timing and form of disclosure outreach prior to foreclosure. This means that the timing of foreclosures has been

pushed out for another few quarters, but it hasn't seemed to reduce significantly the number that will eventually occur. Borrower response to modification, short sale, and "cash for keys" offers at this point is lackluster at best. And rumors about a large-scale principal forgiveness program in the works for GSE loans abounds. As all of the delinquent and underwater loans get resolved, they could easily overwhelm new originations and hold down aggregate residential loans outstanding for some time.

In the commercial real estate space, there are signs that the CRE guidance is working. We're seeing both restructure and foreclosure activity, indicating that problems in commercial real estate are being confronted and resolved with a variety of strategies. Since the guidance came out, we've examined more than half the state member banks with average coverage in the CRE portfolio of 40 percent. This means that we have looked at the actual loan files for 20 percent of the CRE loans in state member banks, in addition to those in the national credit portfolio. It would seem, then, that we've had a good opportunity to weigh in on both loan classifications and loan reserves, but, still, estimates of the remaining loss in CRE loans would indicate that banks have recognized only a small fraction of the embedded losses. It's really hard for me to square the notion of large unrecognized losses with this kind of exam coverage. I'm still investigating to see whether this discrepancy has to do with differences in recognition through reserves or recognition through charge-offs, or whether there's an anticipation of a significant unanticipated and unrecognized worsening in conditions.

Moving on to new loans, banks are actively seeking loan growth, but they admit that new originations are not strong enough to offset payout and charge-off activity. Credit card payment rates continue to climb. Commercial line utilization rates continue to drift down. While bankers report stronger pipelines, it seems clear that the new activity they're seeing is due more to taking

market share from others, as the competition for loans heats up, and less to borrowers deciding to increase debt. Both the smallest and the largest bank with whom I spoke reported purchased mortgage volume at half the level of last year, and the larger bank calculated that refinance activity was 20 to 30 percent lower than would be expected given current rates.

In reviewing the Senior Loan Officer Survey results, I noticed that terms and conditions are easing more quickly than standards. This supports the banker comments that, in competing for the limited loan demand, they are competing on rate and terms, rather than lowering standards, to increase the pool of qualified borrowers. In particular, standards and terms seem to have improved for jumbo mortgages and for small business loans at large banks, although the small business improvement at large banks could be indicative of political pressure rather than a change in their outlook. Indeed, at the capstone small business meeting we had here at the Board, one large bank reported startlingly good results from its “second look” programs. But, in private conversations, I can’t find any other bank that is seeing such results, and most now have an appeals program from their second look program.

Finally, the availability of good lending opportunities is so scarce that two CEOs of sizable banks reported that for the first time in their careers they were actually looking at ways to run off deposits. And a third CEO reported looking at acquisition of failed banks now as a way to find assets into which to deploy excess deposits. In fact, deposit repricing is on the minds of most bankers in the face of new overdraft regulation, reduction in debit card interchange fees, and interest on demand deposits. There’s a lot of waiting to see what others will do, but I certainly would look for the end of free checking for small balance, single-service user accounts. On a positive note for deposits, but a negative note for banks’ willingness and ability to hold or arbitrage reserves, the Dodd–Frank bill changes the assessment base for FDIC insurance from

deposits to total-assets-less-capital, thus reducing the cost of deposits and increasing the cost of all other liabilities.

Putting this all together, it seems that loan growth is currently constricted by three factors: continuing consumer deleveraging and caution on the part of businesses, the repayment capacity of potential borrowers in the form of either business sales or consumer income as the primary driver for loan approvals, and, for real estate loans, the combination of fewer units to be financed, lower valuation of the properties being financed, and lower loan-to-value ratios applied to those valuations. Loan growth does not appear to be constrained by capital liquidity or the level of interest rates.

Finally, every bank of any size remarked on the number of calls from healthy smaller banks asking if there was any interest in buying them out. This phenomenon is likely due to the strain of getting through the credit cycle, the perceived additional regulatory burden of the Dodd-Frank bill, and questions about the profitability potential of the community banking model going forward. It is not likely to result in a lot of consolidation yet, as the potential acquirers are still inwardly focused and waiting for some more clarity on the resolution of problem credits and profit prospects. But, in the medium term, it would suggest another wave of consolidation and potential problems in smaller rural markets that are served only by small banks, none of which is large enough to be successful on its own. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. I'm a little worried down here at the end of the table, because for the last 18 months I've been able just to refer to whatever Governor Kohn said as capturing my view of the economy, which allows me to concentrate on one or two things.

So I'd like to request that, if he carries through on his threat not to show up at the next meeting, maybe he could submit for the record—[laughter]—his ongoing views of the economy.

MR. WARSH. That will cost you.

MS. DUKE. Said his agent.

MR. TARULLO. With externally bred tail risks in retreat, at least for the present, we've all turned our attention again to the key question underlying medium-term economic projections, namely, whether final sources of private demand will become sufficiently self-sustaining to substitute for the waning effects of fiscal stimulus, the absence of further monetary stimulus, and the completion of major inventory replenishment.

While it is perhaps too soon to answer this question definitively, the handoff has clearly not gone smoothly. The prevailing story last spring of a well-established recovery gradually gaining momentum is considerably harder, though not impossible, to tell persuasively. Indeed, against the backdrop of the generally disappointing data of the last couple of months, it seems to me that the downward revision to estimates of second-quarter economic growth renders quite credible a reading of the last year as a burst of stimulus-induced activity in an environment of decreasing financial instability followed by lackluster growth in the face of continued balance sheet repairs, business model adjustments, and shaky business and consumer confidence.

Such a reading is supported by numerous factors already mentioned by a number of our colleagues. In particular, a close look at employment data shows that there has been no net improvement over the last 12 months. In fact, we have gone backwards. From July 2009 to July 2010, the working-age population of the United States increased by about two million. In that same time frame, the number of employed people in the country decreased by roughly 900,000. After increasing in the early part of the year, the total number of people employed has declined a

bit in each of the last three months. The gains in hours worked earlier this year have been maintained but have shown some signs of abating except, possibly, in manufacturing. After nine months of increases, temporary employment also fell last month. In July, the labor force participation rate and employment-to-population ratios had given up the modest improvements seen in the spring and were just about where they were at the end of last year, hovering at levels lower than any time since the early 1980s. Of the six alternative measures of labor underutilization used by the Bureau of Labor Statistics, which incorporate factors such as discouraged workers and longer-term unemployment, five have increased since last July.

Still, this is the past and the present I've been describing. Are there reasons to expect an acceleration of the painfully slow pace of recovery over the next few quarters? Or, more to the point, are there reasons better than those adduced earlier this year in support of projections of stronger growth, which turned out to have been erroneous or at least premature?

The factor most frequently mentioned is that financial conditions have improved considerably since last year. The tightening of credit terms, as Betsy described, appears to be coming to an end, and the decline in bank lending has slowed considerably. Large companies have apparently taken advantage of favorable borrowing conditions to reduce their interest expenses. All of this is true, but it describes not an impetus for faster economic growth, but the conditions that would permit faster growth if the impetus comes from another source. The same large companies that have so successfully accessed public debt markets are sitting on large amounts of cash, which they will continue to do until they see the promise of increased demand that would warrant investment in new capacity. Small businesses have the same view, as reflected in the survey released this morning.

I want to digress for just a moment to say a word about policy uncertainty and skill mismatches as potential sources of suppressed job creation. While both undoubtedly play some role today, neither approach is as important as the most important uncertainty, namely, that of future demand for goods and services. Health care costs are undoubtedly an issue and are likely to continue to be so for the indefinite future. With respect to job mismatches, I'm not sure, Narayana, that a moderate uptick in job openings from near depression levels to the level that was the lowest of the previous ten years constitutes a real mismatch problem. As the recovery moves on, we are going to see mismatches. But right now the basic problem is aggregate demand. And in response to the JOLTS point, I just note that the survey of hard-to-fill positions indicates that they are at historic lows in small businesses.

Other factors cited as grounds for relative optimism include improving export performance, possible release of pent-up demand as consumer confidence improves, a decline in what turns out, after all, to have been significantly increased saving rates once consumers have paid off most of their debt, stronger than expected growth in some foreign markets, the continued recovery in manufacturing following the carnage that began a couple of years ago, and an end to the unusually high productivity growth during the recession.

One might question at least parts of each of these mostly benign possibilities. But even if we grant them all, we're almost surely looking at no more than the kind of moderately above-trend growth that was the central tendency of this Committee not so long ago. And, as seen in the forecasts of even the most optimistic of the Blue Chip forecasters, that translates, at best, into an unemployment rate of about 8½ percent at the end of next year, a figure that I strongly suspect would itself mask a continued low employment-to-population ratio.

With this employment picture, it seems exceedingly difficult to give a plausible account of medium-term rapid economic growth of a sort that would propel us beyond where we would have had trend growth continued through the last few years. Thus, even allowing for some increase in the NAIRU, and some reduction in productive capacity, the only truly open question now seems to be whether the economy will be moderately or badly underperforming for the foreseeable future. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE.<sup>2</sup> Thank you very much. Thank all of you for very constructive comments, and thank you also for respecting the time limits, which was very efficient. Let me try to maintain that, perhaps not quite as successfully, by giving a short summary, and then I'll make a few additional comments.

The economy lost momentum during the intermeeting period, reflecting disappointing incoming data on the labor market, consumer spending, and other areas, although it was noted that month-to-month data can be noisy. NIPA revisions showed that the recession was deeper than previously thought. Most participants expect the recovery to continue at a moderate pace, picking up steam over time, but there is a question about whether economic growth will be sufficient to achieve meaningful reductions in unemployment in coming quarters. Some statistical models show growth well below potential going forward, and uncertainty may be unusually high.

Negative factors to the outlook include economic and policy uncertainty, weak business and consumer confidence, the withdrawal of fiscal stimulus, including a housing tax credit, the waning of the inventory cycle, low rates of residential and nonresidential construction, and continued tightness in credit for some but not all borrowers. It's not yet clear that final demand has picked up the baton from fiscal policy in the inventory cycle.

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

On the other hand, positive factors include reduced investor concern about Europe, which has supported improvement in financial markets, and stronger financial positions of households and larger firms. Longer-term trends are consistent with recovery, but also show that per capita output remains well below pre-recession peaks. Overall, downside risks to economic growth and employment still appear to predominate.

By contrast, the inflation outlook is little changed, with participants still expecting low inflation but not, in most cases, deflation over the next couple of years.

Household spending has recently been weaker than expected, in part reflecting the repair of balance sheets. NIPA revisions showed that household saving was higher than previously thought.

Private sector job creation has been anemic since the spring, weighing on confidence and spending, although wealth and income effects have been more supportive. The unemployment rate has come down largely because of reduced participation and a low ratio of employment to population rather than because of net job creation, and long-term unemployment remains a concern. Multiple measures of underutilization of labor have been stagnant. Employers are evidently reluctant to add permanent employees, given economic weakness and a range of uncertainties. However, hours and labor income have increased. It is uncertain how much of the higher unemployment rate reflects structural factors, mismatch and reallocation, and the effects of unemployment insurance.

Housing has remained depressed, despite rising affordability. Home prices are basically flat, with increases in a few areas. Loan modification programs have been disappointing. Nonresidential construction remains generally weak.

Equity prices have risen, reflecting the bank stress test in Europe and other policy actions to increase investor confidence, as well as strong corporate earnings reports. Declining Treasury yields and a weaker dollar have further eased financial conditions. Larger corporations have easy access to credit. Venture capital activity is up, and there's more life in the CMBS and leveraged loan markets. Bank earnings have also improved, reflecting in part the stabilization or decline in credit losses, and there may be some increase in their willingness to lend. CRE credit remains a problem, but its extent is difficult to judge. The Senior Loan Officer Survey shows some easing in terms and conditions. Small business credit conditions are hard to read. At least some portions of small businesses applying for bank credit are receiving it.

In the nonfinancial sector, industrial production has continued to expand fairly strongly; profits have also been strong. Nevertheless, caution remains the prevailing sentiment, as has been the case since early in the crisis, and there's little appetite for expansion. Firms are holding high levels of cash and prefer temporary workers, hours increases, and cost reductions to permanent hires. Capital investment is mostly confined to replacements and upgrades. Some sectors are showing strength, including manufacturing, autos, energy, temporary help, and shipping. State and local government budgets are a drag on activity, and federal fiscal support is diminishing. However, economic growth abroad remains solid, with Europe stronger and China apparently heading to a soft landing.

Underlying inflation trends, whether measured by core inflation or other indicators, remain subdued. Wage growth and growth in unit labor costs remain moderate, and firms are not complaining about input costs. Deflation risks exist, but a deflation is a relatively remote scenario. Inflation expectations as measured by surveys, forecasts, and bond markets are stable or down slightly. Firms do not generally expect to be able to raise prices significantly.

Policy faces difficult challenges. The effectiveness of policy is uncertain in the current environment, and, to the extent it is effective, it is important not to do long-run harm in addressing short-run problems. However, the Committee is missing both its employment and inflation objectives. Some argue that we need at least to prepare for negative shocks or deflation scenarios. It may also be the case that the cost of further declines in output and inflation are greater than the cost of missing in the other direction. Any comments or reactions? [No response] Seeing none, let me just add a few thoughts.

To begin, notwithstanding the fact that data are noisy, I do think there's clear evidence that the recovery is weaker than we thought. First, we had a substantial revision of history showing that the recession was deeper than we previously thought. Second, the second-quarter figures came in much lower than was anticipated as recently as the April Greenbook. Third, the forecasts for the second half have come down quite substantially; for example, the Tealbook has reduced its second-half forecast from 3.7 percent to 2.5 percent for GDP, and from 2.8 percent to 1.8 percent for consumption. So there has been a fairly significant movement in the outlook, and it shows up in a variety of data, including labor markets, retail sales, housing, and several other areas.

In addition, although I understand that credit is improving generally, I think credit constraints do remain a problem. One illustration of that is the fact that we're seeing very little mortgage refinancing despite very, very low mortgage rates that must be indicative, as the Tealbook suggested, of some constraints on credit availability. I'm also concerned about equipment and software spending. It has been pretty strong and has been a source of support for recovery. But, to the extent, as many people have noted, that it reflects one-time replacements or making up of deferrals, it will not be a leading category going forward.

So, my first observation is that I do believe that there has been a loss of momentum and that the outlook has deteriorated. It's true that there are factors going in the other direction. A number of people have noted the improvements in financial markets and credit extension and the reduction of tail risk associated with improvements in the European situation. I think it is also interesting, as Larry Slifman did, to contemplate the implications of the NIPA revisions on the saving rate—it does have multiple possible implications. On the one hand, it could be that households are making more progress than we expected in deleveraging. On the other hand, it may be that they're just more pessimistic, and they have lower longer-run income expectations than we thought they did.

It is true that the Tealbook expects an acceleration of economic growth in 2011, and I think that's possible. But I would summarize my concern by referring to some comments that I made a couple of years ago when we were focusing on whether or not the economy was going into recession. The issue then was whether or not a recession represents a separate state of the economy; that is, whether there are nonlinearities that cause the economy to shift from one state to another. My own view is that there are important nonlinearities, and they arise from a number of possible underlying factors. An additional factor today is the zero lower bound of monetary policy, which prohibits symmetric responses of policy to negative shocks. I'm not disputing the modal projection of increased economic growth in 2011, but instead I'm arguing that, with an economy that seems to continue to slow, it's conceivable we might reach a tipping point that would shift us into a much weaker situation.

A particularly worrisome indication is the behavior of the unemployment rate. The Tealbook currently projects that unemployment at the end of this year will be 9.7 percent, that is, no lower than at the beginning of the year. With no progress being made on unemployment, it's

understandable that consumer confidence would be low and that, in fact, we might be doing very serious longer-term damage to the economy because of the longer-term unemployment effects on skills and labor force attachment. In summary for this part of my remarks, I do think that the outlook has weakened considerably, and I worry about that because I think there are important nonlinearities in the dynamic process.

My second comment is about inflation and, more generally, about nominal variables. The inflation projections, unlike the real projections, have remained stable in the Tealbook, and they remain, save for core PCE, somewhere around 1 percent or slightly lower. Inflation expectations have been reasonably stable, with, perhaps, a slight trend downward, as was suggested, I think, by President Bullard.

There are also, though, other nominal variables that are of interest. One that I've been paying attention to is nominal GDP growth. I think it's interesting to note that, between the fourth quarter of 2007 and the fourth quarter of 2009, the level of nominal GDP in the United States declined; that is, we had no change or a slight decline in nominal GDP over that two-year period. In the first half of this year, we had nominal GDP increased at an annual rate of 4½ percent. The Tealbook forecasts remain around a rate of 4 to 4½ percent. So we are somewhere at this point 10 to 12 percent below where the trend line would have shown us to be for nominal GDP.

I mention this because of the discussion about monetary policy versus other tools. I think even a worldview in which monetary policy's effect on the real economy is quite limited would argue that there's something wrong if we are missing our two objectives on the same side, that is, if we have employment that is too weak and inflation or nominal variables that are too low. I think that's a pretty strong indication that we are underperforming in terms of policy. So I think

there's a case there for some additional stimulus, even if you are somewhat skeptical about the effects on the economy of our policy.

Let me quickly address a couple of other themes that have been raised today. First, let's talk a little bit about uncertainty and its effect on investment and hiring. As President Yellen mentioned, this was, in fact, in my Ph.D. dissertation. I'm glad to see that, after 31 years, it's finally getting a little attention. [Laughter] There's no doubt that uncertainty is affecting the willingness of firms and consumers to make commitments to take on long-term investment or hiring, and I think there has been some empirical evidence for this. I would note the Reserve Bank survey on capital spending plans, which was circulated ahead of the meeting to everyone—I think it showed some evidence for this view. In particular, that survey showed that about 60 percent of the firms surveyed in January and July were not planning to increase capital expenditures, and of that 60 percent, 15½ percent in January and 19½ percent in July said that increased or high economic or financial uncertainty was the main reason—that's not trivial. At the same time, similar percentages cited expected sales growth or low capacity utilization as reasons.

A couple of other indicators are given in the handout that was put out just for interest. The first picture in the handout shows essentially the mean and the variance of earnings expectations for S&P 500 firms. Let's focus on the bottom picture. That picture shows the following variable: For each firm in the S&P 500, the variance of analysts' forecast for year-ahead earnings was constructed, and then that number was averaged across the 500 firms weighting by assets. This is a pretty legitimate measure, I think, of uncertainty about earnings a year ahead, which surely must be the most fundamental thing that firms are concerned about. If you look at the right-hand side of the bottom chart, you see that uncertainty did soar in 2009, but,

currently, that particular measure of uncertainty about, at least, the year-ahead earnings is pretty normal—it's not particularly high even relative to the long-term trends. So that's one indication, for what it's worth.

The second indication is on the second page, which is drawn from the NFIB survey which came out this morning. The top chart shows the results when firms were asked about the most important problem, and, clearly, as Governor Tarullo noted and has been noted by others, by far the biggest problem is weak demand. So I think aggregate demand has got to be a part of the reason that firms are not hiring and not investing. In the bottom chart, you see some additional variables, including government regulation, which is shown in the dark black. The chart shows that 15 percent of the small firms now view uncertainty about government regulation as their most important problem. But it doesn't seem to have moved very much in the last couple of years, and it's certainly much lower than it was in the early 1990s. I don't want to draw too strong a conclusion from that, but I would say that I don't think uncertainty by itself explains the depths of the recession, nor, for that matter, do I think it makes monetary policy impotent, because the cost of capital is still relevant on the margin, although it's clear that it might weaken the effect of that in some circumstances.

As long as I'm talking about the real side here, I'll just say one word about mismatches, which also came up today. There's certainly some of that. The staff looked at this in some detail, and they have not found much evidence of reallocation across industries. That's an unusual feature of this recession, and I would just point out that employment in many so-called standard or conventional industries is way below not just the bubble years, but even below 1990s levels. For example, it's true that we may never see the home construction rates we did in 2007, but, surely, there is scope for expanding home construction relative to the current level, given

population trends and so on. The same thing would apply to parts of manufacturing, to retailing, to health, and so on. So, even though there will be reallocation and mismatch, it seems to me clear that there's a lot of scope for increasing demand within existing industries and skill categories.

I want to make one other comment briefly. For the sake of time, I don't want to go into detail on President Bullard's very interesting paper on inflation and expectations in Japan, but I want to make a couple of quick points, and I'll refer to the third page in the handout. The top chart shows inflation expectations with different horizons in Japan as measured by Consensus Economics, which is a well-known international firm. The black line shows one-year-ahead inflation expectations, and the blue and the red lines show longer-horizon inflation expectations for Japan. In the bottom chart, the black line shows actual headline inflation in Japan. I think there are a couple of interesting things to observe from these charts. One is that the literal story of a deflation trap does not seem consistent with them, because, at horizons longer than one year, the expectation was for inflation, not for deflation. That still is the case today.

But the more interesting thing is that there seems to be a pretty close correlation between expectations, particularly at the one-year-ahead horizon, and actual inflation. Just from a visual inspection, a comparison of the black lines in the top and bottom figures suggests to me that inflation expectations, consistent with President Bullard's work, have learning components, that is, they are partially adaptive and partially reverting to the anticipated central bank inflation objective. If that's the case, it's useful information for us. In particular, it suggests that the best way to avoid a deflation trap is to avoid actual deflation, because it's only if you observe deflation or see something near deflation that deflation expectations are likely to emerge.

Therefore, I would like essentially to endorse President Bullard's perspective, which is that deflation can be a trap, and, indeed, while I won't discuss the analysis here, I think that in that model you can generate adverse deflationary spirals. I think the best way to avoid deflationary traps is to be preemptive and to use strong actions and words to avoid getting into a deflation trap in the first place, and that would underlie the argument, I think, for a more preemptive approach to policy. I will close there, and at this point we can go to the policy go-around. Let me turn it over to Bill English.

MR. ENGLISH.<sup>3</sup> Thank you, Mr. Chairman. I'll be referring to the package labeled "Material for FOMC Briefing on Monetary Policy Alternatives." This package includes the three draft policy statements that were distributed yesterday evening as well as revised draft directives. Changes since the last time these documents were distributed are shown in blue.

The incoming data over the intermeeting period were on the weak side of expectations, as most of you noted during the economic go-round. If the information you've received in the past seven weeks led you to mark down your forecasts for output, employment, and inflation, you might be inclined to provide additional monetary accommodation to boost economic growth, to limit the extent to which inflation moves further below levels that would be consistent with your dual mandate over the longer term, and to trim the downside risks to growth and inflation. Alternatively, if you judge that the data suggested only a temporary "soft patch" for the economy, you might be more concerned about the longer-term risks that an extended period of exceptionally accommodative monetary policy could pose for macroeconomic and financial stability and so might be inclined to begin reducing the degree of accommodation relatively soon.

Last week, you received three staff memos discussing possible methods for providing additional policy accommodation. These included a memo on cutting the target federal funds rate and the rate paid on reserves, a memo on using firmer forward guidance to reduce investors' expectations for the future federal funds rate, and a memo on the potential effects of reinvesting repayments of principal on agency mortgage-backed securities rather than allowing those securities to run off. As background for today's discussion, I want to highlight three results from those memos:

First, the staff judged that reducing the target range for the federal funds rate to 0 to  $\frac{1}{8}$  percentage point and cutting the interest rate on reserves to 10 basis points would likely leave the federal funds rate trading in a range between 5 and 10 basis

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

points and would not cause major problems for market functioning. The effects of larger cuts were uncertain and might adversely affect the functioning of money markets.

Second, changes in forward guidance can move longer-term yields, to the extent that they alter investors' expectations for the future path of short-term rates. But, with investors pricing in considerable odds that the federal funds rate will remain within its current target range through 2011, the Committee might have to provide the market with a signal about its policy intentions quite far into the future to have a meaningful effect on financial conditions.

Third, with the actual and anticipated rate of mortgage prepayments having picked up, the Federal Reserve's holdings of MBS are running off faster than had been anticipated. As a result, the portfolio balance effect generated by the large-scale asset purchases is unwinding, putting upward pressure on longer-term rates. Reinvesting the repayments of principal on SOMA holdings of MBS would counter this effect and avoid a passive tightening in the stance of monetary policy. The staff estimated that adoption of a reinvestment strategy could result in a 10-year Treasury yield that was as much as 20 basis points lower than would be the case if the current strategy were retained. However, as the memo noted, this estimate is quite uncertain and may be overstated, in part because it is based on market reactions to FOMC announcements of asset purchases that were made when financial market functioning was impaired.

Of course, the same approaches could be used to reduce policy accommodation if the Committee thought that were appropriate. For example, the Committee could signal an earlier increase in the funds rate than investors currently expect or decide to stop reinvesting principal from maturing Treasury securities.

With that summary of the staff memos in hand, let me turn to the three policy alternatives that were distributed yesterday. Alternative A, page 2, employs all three approaches to providing stimulus. As noted in the first part of paragraph 3, the Committee would reduce the target range for the federal funds rate to 0 to 1/8 percent and support this change by cutting the interest rate paid on reserve balances to 10 basis points. This change in the target range would be reinforced by strengthened forward guidance. In particular, the end of paragraph 3 would drop the "extended period" language that has been used for some time, and instead indicate that the Committee "anticipates maintaining this range for the federal funds rate until resource utilization and underlying inflation have moved appreciably closer to levels consistent with its longer-term objectives." This language would likely be interpreted by market participants as pointing to a longer period of very low short-term rates, which presumably would be reflected in some decline in intermediate- and longer-term interest rates beyond that attributable to the change in the target federal funds rate alone.

In addition, as noted in paragraph 4, the Committee would reinvest principal payments on agency debt and agency MBS, rather than simply allowing the securities

to run off. As written, alternative A would call for reinvestment to be in longer-term Treasury securities, but it also offers an alternative under which the reinvestment would be in agency MBS. While offsetting MBS paydowns with MBS purchases has the benefit of being easy to communicate as a fairly straightforward adjustment to current policy, Federal Reserve holdings of MBS are already large, and further purchases might strain market functioning. Buying Treasuries would not run such risks, because Federal Reserve holdings are currently a smaller share of total Treasury debt and the Treasury market is larger and more liquid than the MBS market. Moreover, the Committee might feel that purchases of Treasuries were preferable, because they would be consistent with the long-run objective of returning to a Treasury-only portfolio. For the same reason, the Committee might be more willing to hold Treasury securities to maturity, reducing the risk of having to realize losses on sales. You may have noticed that we moved the words “longer-term” relative to where they were in the Tealbook. We did so to be consistent with wording in past statements and so to avoid potentially causing confusion among market participants. We have also inserted a footnote into the statement alerting the public that there will be a technical note from the Desk that will provide operational details on how it will carry out these transactions. Brian Sack can provide more information on that later. The final sentence of the paragraph notes that the Committee would continue to roll over maturing Treasury securities.

As a rationale for these policy steps, paragraph 1 of alternative A would note that “information received over recent months has increasingly suggested that the recovery in economic activity and the labor market is proceeding at an unsatisfactory pace.” It would note that household spending is increasing only gradually, equipment and software spending is rising less rapidly than earlier in the year, and that the contribution of inventory investment to growth is likely to wane. The statement would reiterate that nonresidential investment is weak, employers are reluctant to add to payrolls, and that housing starts are at a depressed level. On the financial side, it would note that conditions have become somewhat less supportive of economic growth in recent months and that bank lending has continued to contract. The first paragraph would conclude by stating that the Committee still anticipates a gradual return to higher levels of resource utilization in a context of price stability but that the near-term outlook for economic activity has weakened. The inflation paragraph would indicate that “inflation is likely to remain, for some time, below levels that the Committee considers most consistent with its mandate to promote maximum employment and stable prices.”

The Desk’s dealer survey suggested that market participants placed some odds on policy moves along the lines of alternative A by the end of this year. They put the highest probability on reinvestment of the proceeds of agency debt and MBS and on firmer forward guidance and a lower probability on a reduction in the rate paid on reserve balances. While, at the time of the survey, none of these actions were expected at today’s meeting, expectations have shifted since that time as a result of market commentary and the weaker-than-expected employment report, and some dealers now anticipate that the Committee will announce a shift to reinvestment of MBS proceeds at this meeting, with the reinvestment expected to be into Treasury

securities. Nonetheless, market participants would be quite surprised by the combination of actions in alternative A. The result would likely be a material reduction in intermediate- and longer-term interest rates, although the effect on longer-term rates could be damped if the scope of the policy response led to an increase in longer-term inflation expectations. Equity prices would probably rise and the foreign exchange value of the dollar decline. However, the very weak tone of the first paragraph of alternative A could lead investors to mark down their outlook for economic activity, and so for profits, limiting the effect on equity prices.

The language in the first paragraph of alternative B, page 3, is somewhat less downbeat than in alternative A but still notes that the pace of the recovery in output and employment has slowed in recent months. It notes that household spending is increasing gradually and equipment and software spending is rising. After reiterating the language from the June statement regarding nonresidential structures, housing starts, and bank lending, the first paragraph concludes by noting that the recovery is likely to be “more modest in the near term than had been anticipated.”

The inflation paragraph would drop the references to recent declines in energy and other commodity prices, but otherwise stick fairly close to the language employed in June, noting that measures of underlying inflation have trended lower and that inflation is likely to be subdued for some time. The Committee might want to end the paragraph by stating explicitly that levels of inflation are likely to be lower than are desirable over the longer run.

The target range for the federal funds rate and the forward guidance in paragraph 3 are unchanged from the June statement. The Committee again would note that it anticipates that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for an extended period. This language seems to have guided expectations in a helpful way of late, and you may not be inclined to change it now.

Paragraph 4 indicates that to help support the economic recovery in a context of price stability, the Committee will maintain the Federal Reserve’s holdings of securities at their current level by reinvesting principal payments on agency debt and agency MBS in longer-term Treasury securities. Again, there is alternative wording that suggests reinvestment in MBS. Maturing Treasury securities would continue to be rolled over.

You might see the decision to reinvest repayments on agency debt and MBS in alternative B as appropriate if you now anticipate that unemployment and inflation will move toward values consistent with your dual mandate even more gradually than seemed likely at the time of your June meeting, and you see that very gradual progress as not acceptable. Taking action at this meeting would seem particularly appropriate if you saw weakening business and consumer confidence as posing significant downside risks to that outlook. Even if you believe that the current deterioration in economic performance is likely to be limited in duration, you may think that the weaker outlook and the associated risks are large enough to warrant some policy response.

This alternative would come as much less of a surprise to market participants than alternative A. Indeed, judging from market commentary, some investors likely expect an outcome along the lines of alternative B, while the timing of the policy move would be somewhat surprising for other investors. Intermediate- and longer-term rates would likely decline to some extent, equity prices would probably rise, and the dollar depreciate.

Finally, if you remain convinced that a sustainable economic recovery is under way and are especially concerned about the potential adverse effects of continued extraordinary monetary policy stimulus, you might believe that the Committee should begin moving soon to a less accommodative posture and accordingly modify its language now, as in alternative C, page 4. Under this alternative, the Committee would revise its forward guidance for the federal funds rate to suggest an earlier-than-anticipated increase in short-term interest rates. In particular, the statement would indicate that the Committee now anticipates that economic conditions would warrant a “low,” rather than “exceptionally low,” target range for the federal funds rate for “some time” rather than for “an extended period.” In the first line of the paragraph, the statement would also change “will maintain” to “decided to maintain” to indicate that the Committee’s decision to retain the current low target funds rate range applied only to this meeting. In addition, under alternative C the Committee would begin to run off its holdings of Treasury securities as they mature in order to reduce the size of the Federal Reserve’s balance sheet.

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

Draft directives for the three alternatives are presented on pages 5 through 7. We have made changes to the language of the draft directives to square them up with the wording in the draft statements, and we have included alternative wording for reinvestment in MBS should the Committee make that choice. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. As noted by the footnote on alternative B, in the event that we decide to reinvest our agency securities into either Treasuries or agencies, Brian Sack and his team have prepared a technical note that will be released at the same time as the statement, and we will circulate it so that you have plenty of time to look at it. I thought I’d give Brian just two minutes to say something about the technicalities of reinvestment for either of those two asset classes.

MR. SACK. Let me just describe some of the broad features of the strategy that we would employ should the Committee move in this direction. First, the Desk would calibrate the total amount of purchases of longer-term Treasury securities or MBS to maintain the Federal Reserve's holdings of domestic securities at the current level, as the FOMC directed. The most recent H.4.1 data release indicates that the face value of outright holdings of domestic securities in the SOMA was \$2.054 trillion, so we would take that as a target for the size of the portfolio. The actual amount of our holdings would vary to some degree around that level, given differences in the timing of the settlement of our purchases and the paydowns of MBS.

On timing, we would essentially implement this on a monthly schedule. Principal payments on MBS occur in the second half of the month in a very lumpy fashion—on three particular days. But we'd learn about the magnitude of those paydowns about a week into the month with the publication of the MBS factors by the GSEs. That would give us an opportunity to begin purchasing securities ahead of the realized paydown, so that we could smooth the purchases and still remain relatively close to the target. We would announce a schedule in the middle of the month of the purchases we intend to conduct over the following month. If we were buying Treasuries, that announcement would include the total amount of the purchases and a detailed schedule of what days we would purchase. If we were buying MBS, we would be purchasing in the secondary market on a relatively continuous basis, so that announcement would just give the total magnitude of the purchases we would expect.

In terms of what securities we would be buying, our intention was to structure the purchases of Treasury securities the same way we did in the first round of large-scale asset purchases. That means purchases would be concentrated in the 2- to 10-year sector of the nominal yield curve, although some purchases would occur across the curve and in TIPS as well.

Under that approach, the duration of the purchases would be between five and five and a half years, which is similar to the typical duration of newly issued MBS. On that score, then, whether we're buying Treasuries or MBS, we have pretty much the same duration.

Operationally if we were buying Treasuries, we would do it over FedTrade with the primary dealers—if there were no outstanding issues, it could be implemented immediately. With MBS, as I said, we'd be buying in the secondary market. We would be executing those trades internally as we did at the end of the first LSAP over Tradeweb.

Under any of these plans, we could publish as early as tomorrow our anticipated purchases over the next month, and we could begin operations within a week, if desired. The purchases over the first month in either case would be expected to total nearly \$20 billion.

CHAIRMAN BERNANKE. Thanks. I have one additional point. In the August 3 re-funding announcement by the Treasury, it was asked how it would change its issuance if the Federal Reserve decided to change its purchase pattern. The Treasury essentially said it would offset whatever the Fed did. This means that if, at some point, we decided to acquire more longer-term securities, we should not feel trapped. For example, suppose that in the future we decided to adopt option 2 from the last meeting, which is rolling over medium-term securities into bills or other short-term securities. We could do that with the knowledge that the Treasury was going to offset that action, so the net effect on monetary policy would be nil, and we could present it that way. That gives us a bit more flexibility if we get to that point. I wouldn't recommend that we try to do it today because there are too many moving parts. Any questions for anyone? President Lacker.

MR. LACKER. Brian, you said that when you found out about the amount of prepayments that would come on these three settlement days, you would buy Treasuries ahead of

time. You said something about smoothing, but this would introduce fluctuations in total reserve balances. Why don't you just do reverse auctions the day of the settlement and announce them in advance?

MR. SACK. We decided that we didn't want to concentrate the settlement of the purchases so much to try to perfectly match those lumpy prepayments of the MBS, so we were left with a couple of choices: We could wait for those prepayments and then make them up over time, or we could take the approach I described, which was to anticipate those prepayments and begin in advance.

MR. LACKER. I guess I'm asking why you made the decision not to bunch them on the settlement days.

MR. SACK. We had two reasons. First, we thought it was probably least disruptive to make the purchases with conventional settlement practices; to use something other than conventional practices would be a change for the markets, plus it would introduce a number of additional parameters, such as credit risk exposures we would have on unsettled trades, and so on. So we thought there were benefits to maintaining standard settlement timing of purchases.

Second, we didn't think there was much disadvantage in having modest variation of asset holdings around this targeted level as long as the markets understood that that was the targeted level and that over time we would be moving towards that level. So, if we think there's a portfolio balance effect associated with the expected stock of our holdings, I think it's essentially unaffected if we have modest variation around the target level.

MR. LACKER. The first factor doesn't apply to Treasuries. You can do that any day of the week, right?

MR. SACK. Okay. Sorry. To make the settlements lumpy to match the MBS, we could do two things. We could keep the one-day settlement standard and just do three massive operations toward the end of the month, or we could conduct auctions well in advance of settlement. I thought you were talking about the latter. For the former, I think it's just probably too much to auction off in a few operations. We're expecting, as I mentioned, nearly \$20 billion of operations this month, and it would raise risks and probably be undesirable to try to do that in just a couple of operations. I think it's a lot smoother for the markets and that we'll end up getting better market functioning and better pricing if we can smooth that out over multiple operations.

MR. LACKER. Just one more question?

CHAIRMAN BERNANKE. Sure.

MR. LACKER. This has to do with duration. You're going to reinvest in securities with 5½ years duration?

MR. SACK. Right.

MR. LACKER. So a security that's about to be prepaid has an implicit duration that's pretty short, right? Is this going to increase our duration on net? That is, how is the duration going to evolve?

MR. SACK. It will lift our duration. This is a bit complicated. The duration of our portfolio is expected to drift up over time in any case as we get the prepayments of the ones that are likely to prepay and then eventually as rates drift up. Under a strategy where we do not reinvest, our projection of the duration of the SOMA portfolio is 4.1 years as of the end of 2011, and with the reinvestment strategy in the Treasuries, it rises to 4.5 years. So there is some uplift in the effective duration of the portfolio.

CHAIRMAN BERNANKE. Vice Chairman, did you have a comment?

VICE CHAIRMAN DUDLEY. I have two points. First, one way to think about it, President Lacker, is that, to the extent that these mortgages are being refinanced, if you're asking the private sector to hold them instead of having the Fed hold them, you're asking the private sector to take on quite a bit more duration, and that's going to show up in longer-term rates that the private sector demands, right? I think the choice should be comparing the option of our holding it with the private sector holding it and deciding whether we're comfortable with making the private sector hold it and what the implications of that are for longer-term rates.

Second, I just want to ask Brian a very quick question. The statement as proposed is "at the current level." Would you feel more comfortable saying "around the current level"? It's a very small point, but we're not going to be "at the current level."

CHAIRMAN BERNANKE. But there's going to be a simultaneous issuance of the press release which says basically what our target is going to be and the process.

VICE CHAIRMAN DUDLEY. But it's going to move around, though, by, say, \$10 or \$15 million, right?

MR. SACK. I was more concerned about the directive, which clearly states that it will be kept at approximately this level.

VICE CHAIRMAN DUDLEY. Okay.

MR. SACK. Or approximately \$2 trillion.

CHAIRMAN BERNANKE. And I recognize my error in introducing this topic. I'll turn to President Kocherlakota.

MR. KOCHERLAKOTA. I have a question for you, Mr. Chairman. When you say the Treasury will offset what we do, is it going to take actions that will leave the duration in the private sector the same?

CHAIRMAN BERNANKE. Yes. That was the idea. But that's not with respect to this action.

MR. KOCHERLAKOTA. I'm talking about the other action.

CHAIRMAN BERNANKE. It can obviously only affect the Treasuries. It's not the MBS part.

MR. KOCHERLAKOTA. Yes, in terms of the Treasuries.

CHAIRMAN BERNANKE. Currently we are rolling over Treasury securities into Treasury securities of essentially the same maturity. If in the future we decide to roll over our longer-term securities into shorter-term securities—bills and other short-term securities—the Treasury has announced its intention, although I think we don't want to be completely reliant on it, to change its issuance so that the private sector's holdings are unaffected by our action.

Governor Duke.

MS. DUKE. I have a question on the note about replacing the maturities. It looked to me that there was a dollar amount anticipated of somewhere between \$240 and \$540 billion, and so in calculating the basis-point effect on longer-term rates, what sort of stock does that imply? What total dollar amount of purchases does that imply? How long does that imply that we continue to reinvest? And, finally, how does the market know that that's the dollar amount that we're going to reinvest and the time commitment—if that question makes sense?

MR. ENGLISH. Yes, it does. What we've assumed is shown on the very back page of the memo in terms of estimates of mortgage-backed securities holdings, and the maximum

difference is about \$400 billion. As we get prepayments on these instruments and reinvest them, the stock of MBS stays constant instead of declining, as it's currently projected to do. We do that until, under the assumptions in the memo, early 2012, and then let them run off. In fact, we would be selling them at that point. So the maximum difference is about \$400 billion. I think there is a question as to what the market participants expect from this, and we would be announcing an intention to start doing this. We're not telling them how long we're going to do it, so they would assume we're going to do it for a while, but they may not have in their mind exactly this trajectory.

CHAIRMAN BERNANKE. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Governor Duke, were you not finished? I'm sorry.

MS. DUKE. Does this mean that when we calculate the 20 basis points, it's the same as announcing a \$400 billion purchase of Treasuries or roughly the equivalent? Is that how we calculated it?

MR. ENGLISH. We calculate it by looking at the different portfolios and the effects of those portfolios on longer-term rates. I think it's correct to say that it's broadly similar to \$400 billion of purchases followed by sales. It's not going to be identical unless you bought them following exactly this trajectory and sold them following exactly this trajectory.

MS. DUKE. Thank you.

MR. REIFSCHEIDER. It's not greatly different though.

MR. ENGLISH. Right.

CHAIRMAN BERNANKE. Governor Tarullo.

MR. TARULLO. Bill and Brian, the bracketed language providing the alternative for rolling over into MBS presumably reflects the preference of some people based on a combination of policy and signaling concerns for choosing that alternative. But you, in particular, Bill, alluded to the potential impairment of the functioning of the MBS market. Can one or both of you elaborate on the degree of that impairment, that is, how high the costs would be, so that people who have some exogenous preference for rolling over into MBS have a sense of what the offsetting costs are?

MR. SACK. It's difficult, obviously, to calibrate the cost precisely, but I will say I do have some concerns about rolling over into MBS. We can design the program to be as gentle as possible. I think that means sticking to production coupons, smoothing purchases as much as we can, probably going back into a dollar roll book, or maybe even coupon swaps. We can take a number of steps, but we clearly risk putting more strain on the MBS market. Calibrating that strain is hard, as I mentioned in my briefing. When we look at the market, there's a lot of mixed evidence. For example, trading in the production coupons seems okay, that is, it's not significantly impaired, yet, at the same time, we have these settlement problems, and everyone's concerned that at some point they're going to come back to bite market functioning.

So rolling over into MBS would risk putting more strain on the market. I also think it creates a risk of damaging our reputation with market participants, at least in those circles around MBS markets. We've tried to be as responsible as possible to market functioning in the context of this large program, but, obviously, there's a lot of attention on the fails and on the role we've played in market functioning, and I worry that going back into the MBS market may be seen as being a bit out of touch with some of those strains. I think there probably are risks. They are hard to calibrate. One other thing that might lead you to a second set of Treasury purchases is

that the portfolio balance effects, in our view, are nearly equivalent, given that you're removing the same amount of duration from the market in either case.

MR. TARULLO. Thank you.

CHAIRMAN BERNANKE. President Fisher, did you have a question?

MR. FISHER. Thank you, Mr. Chairman. Brian, could you summarize the benefits and potential costs of the strategy for the markets, viewed purely from the Desk's perspective?

MR. SACK. The benefits and the costs?

MR. FISHER. Yes, purely from the Desk's standpoint. How much do we expect to see longer-term rates fall, and what's the potential cost of doing so?

MR. SACK. The benefits are lowering longer-term interest rates. I'd take 20 basis points as an upper bound of the estimates—these things are hard to calibrate, because we don't know the duration of the effects—so I'd say somewhere in the range of 10 to 20 basis points.

MR. ENGLISH. That might already be built in.

MR. SACK. Absolutely.

MR. FISHER. Built in by the market's expectation of our adopting this strategy?

MR. SACK. Right. The costs have been discussed around this table in the past, and they include possibly complicating an exit strategy down the road and possibly putting too much risk on the Fed's balance sheet.

I feel that, especially in Treasuries, there are reasons to think we have plenty of ability to exit even if we do this reinvestment: The draining tools are proceeding nicely in their development; we have a long history of Treasuries; we know how to sell them, if it came to that; in other words, operationally, they're easy for us to deal with. I don't have great concern about it complicating our ability to exit. I also don't have great concerns about its effects on the risks to

our balance sheet, because I think the economic benefits should be put well in front of any risk to financial return, and also because we have a portfolio with a lot of embedded positive return already, as I showed in my briefing.

MR. FISHER. I guess your argument is that there's less potential cost in terms of exit strategy with Treasuries than we would have if we had all MBS.

MR. SACK. Yes. Don't get me wrong—I think we could exit under either scenario. But it is true that Treasuries are operationally easier, so, at the margin it complicates the strategy slightly less.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. Let's go to the policy round and start with President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. I support option B. We currently are unlikely to make any progress on either element of our dual mandate over the course of this year. In fact, it's quite possible that the unemployment rate could be higher and the inflation rate lower at the end of this year. Moving in the wrong direction on both elements of our mandate, given how far we are from where we want to be, is highly undesirable. Making such an outcome less likely is appropriate, and the reinvestment of maturing mortgage-backed securities will highlight that we are now further from the exit and are willing to take more aggressive action if necessary.

In considering the likely trajectory for inflation, I would emphasize that I take less comfort than some in anchored inflation expectations. My staff has been looking at the same charts as the Chairman, and recent work by Jeff Fuhrer examining the deflation experience in Japan has found that longer-run inflation expectations there have been well-anchored above 1 percent for more than a decade. However, the realized core rate of inflation has remained

negative for almost that entire period, despite the stable longer-run inflation expectations. While there are many differences between the U.S. and Japanese economies, this comparison suggests to me that the risk of deflation, even in the presence of anchored expectations, is greater than what I would like at this stage of the recovery. While deflation is only a risk at this time, it is appropriate to take out insurance against that risk. Should that risk become greater, we will need to take out more insurance. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I support alternative B. Given the tenuous state of business and consumer confidence, I consider it critical at this juncture that this Committee not be perceived as falling behind the curve, being unwilling to act, or being out of touch with the mounting concerns we see in the markets and on Main Street. The data show a considerable slowing of the economy during the summer, and the near-term outlook has been marked down appreciably. With respect to language, I think paragraph 1 of alternative B best captures the recent economic deceleration.

I strongly favor reinvesting the runoff in our agency portfolio. The anticipated runoff over the next two years in our agency portfolio due to prepayments has been revised up very significantly since our last meeting. So a continuation of our practice of redeeming agency debt and MBS now entails a much more substantial removal of policy accommodation. Such an acceleration in the extent of passive policy tightening is unwarranted in our current circumstances. At the present time, MBS–Treasury spreads are quite narrow, so I can support rollovers into Treasuries. But I would not want to preclude future rollovers into MBS under different market conditions.

I think we should also be considering the options available for further accommodation, and I would be strongly inclined in that direction if the forecast is downgraded to the point where we project that unemployment will be edging up rather than down. Our quiver has fewer arrows than I'd like. I'm not certain just how effective the remaining arrows will be, but a renewal of asset purchases, either Treasuries or potentially MBS, is the most potent arrow remaining. We can all imagine scenarios of a double-dip recession or grinding deflation in which we may have to start expanding our balance sheet partly by buying more Treasuries or MBS. An advantage of ceasing redemptions now is that it signals our openness to moving in this direction, while at the same time indicating that we need not take this step if the outlook improves.

On other aspects of alternative B, I support the inclusion of the bracketed language in paragraph two. This statement is consistent with the June FOMC forecasts, and it's a powerful signal about our unwillingness to tolerate continued downward-drifting inflation.

I thought quite a bit about the proposed language in the original version of B1, paragraph 3, and in alternative B relating to "extended period." Given the time pressures at this meeting, I think it's wise to table action on this matter for today. Market participants don't expect such a change, and they've already pushed out their expectations considerably concerning the length of time that we will hold the funds rate target near zero, as the outlook has been weakened. It might be desirable to reinforce and possibly strengthen these market expectations. My concern, though, is that the language we would logically use in such a statement to condition the length of "extended period" and to describe the triggers for ending it depends importantly on the particular monetary policy strategy and forecast this Committee uses. The differences in timing and triggers across various policy rules, for example, and forecasts turn out to be very large. These are matters on which the Committee has not yet found consensus, and I think we need to analyze

this further. There are other options available to strengthen our forward-looking language, and I very much appreciated the thoughtful staff memos describing possible options to enhance forward-looking guidance. I think these deserve serious consideration going forward.

CHAIRMAN BERNANKE. Let me reiterate the thanks to the staff. I think we all appreciated that input. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I don't think economic growth prospects have deteriorated enough to warrant a change in our plans. We have always thought this recovery would be slow by historical standards, and the data have borne that out. The corollary of a slow recovery is that unanticipated fluctuations around a low mean growth rate will at times generate fairly sluggish numbers. When those fluctuations are large enough, a policy response is appropriate, but I don't think we've crossed that threshold yet. The Tealbook has been pegging 2010 economic growth at 3 percent for quite a while. Relative to that expectation, 2½ percent growth in the second half isn't bad enough in my mind to suggest we need a change in course. So I came into this meeting favoring B2 over B1, which, I guess, means that I oppose the current version of B, and I favor what I'll call "B classic." [Laughter] That is, alternative B without paragraph 4.

I talked a little bit earlier about why I think the fall in interest rates represents an easing in policy in a very real sense. The theory of the case has always been that our quantitative easing program—I think we're calling it that now—is affecting the economy by removing duration from the market. The fall in interest rates is a rise in the price of duration. So what are we going to do? We're going to make duration scarcer? I suggest that, by keeping our policy stance unchanged, we'd accommodate the increase in the demand for duration by selling assets rather than removing them.

Another way to think about this is to consider the question: What would it look like if we kept quantitative easing in place for too long? To answer this, I'll reference the discussions we had last fall, when some of us were saying that we should cap the asset-purchase program, because it was in danger of going too far, that is, of buying too many assets. Well, what would it look like if we went too far? Banks would want to shed reserves at existing interest rates. They'd be unable to do so, because we'd be forcing them to hold these reserves. Some fall in interest rates would be required to induce them to hold those reserves voluntarily.

Last year, the response was, "Well, if this were happening, we'd see an increase in bank lending." Well, we're not seeing an increase in bank lending. We're seeing banks buy assets—somebody is selling them to them—and somebody is lending money by buying corporate debt. So we're seeing lending going up. We're seeing private sector borrowing going up. That suggests to me that we could be seeing something like the effects of quantitative easing in place for longer than we intend.

I'll give you an anecdote. I talked about shifting demand curves for money. One institution in my District was scolded for quarter-end window dressing; that is, within the quarter, they did \$70 billion worth of arbitrage between the agency RP market and interest on reserves. Now that this is shut down, their holdings of reserve balances have effectively been reduced by \$70 billion—for some reason having to do with SEC enforcement. Picture four years ago, with a \$70 billion increase in excess reserves sloshing around in the system, and ask yourself what that would do.

That's just one example. Now, there may have been other offsetting increases in the demand for reserves somewhere, but I sort of suspect not. That's the kind of thing that we have to be aware of as we proceed. Some dramatic pullback of banks from willingness to hold all the

reserves we have out there at existing interest rates is going to shift the demand curve for money, that is, make policy more stimulative, and it could take us off course.

Let me mention one final thing, and that's the pace of sales of assets when we exit. We discussed that earlier this year. There was a great hesitance to consider a pace of sales greater than a certain amount. If we're still going to be unwilling to sell assets at greater than some certain pace because of the fear of disrupting the market, then we're taking an action here that could affect us for five, six, seven years. All the way out, it's going to increase the path of reserves. That makes me really hesitant to take a step like this. So, as I said, I favor B classic, that is, alternative B without a paragraph 4.

CHAIRMAN BERNANKE. Just for clarity, we're talking about keeping the current level of reserves constant, not adding to the current level.

MR. LACKER. I know, but the path of reserves is higher all the way out compared with the case in which there is a constraint on the maximum pace of sales.

CHAIRMAN BERNANKE. President Evans.

MR. EVANS. Thank you, Mr. Chairman. My views on the pace of the recovery have not changed radically. I have not materially altered my outlook, but, after quite a bit of thought, I have come to the judgment that our monetary policy response is woefully inadequate for the economic situation that we face. Consequently, I've come to favor a far more aggressive version of alternative A that would include substantial additional purchases of Treasury securities.

In order to use my time most effectively, I won't go into any details on the wording of alternative A, since I suspect it's not a live option today. Instead, I will explain my reasoning, which is basically this: The staff's forecast for 2012 has the unemployment rate at 7.6 percent and core inflation at 1 percent. As you mentioned, Mr. Chairman, that's a same-sided miss for

policy, and I think that's very bad. Maybe my gut can persuade me that the staff forecast is a bit too pessimistic, but hard quantitative analysis does not. Any optimism in my forecast relies too heavily on unobserved inflation expectations remaining firm in the face of low actual inflation and a general presumption that a more robust recovery ought to be inevitable given all of the slack we see. The Tealbook analysis, which is state of the art, apparently unrivaled, has incorporated both of these factors and more. I've come to the conclusion that anyone who takes this forecast seriously must either (1) expect more monetary stimulus or (2) think that the Fed is out of policy options. I think the public already understands how unacceptable the situation is. That's certainly my inference from outreach discussions with businesses and the public.

But let me be explicit within the terms of the economic analysis of our briefing documents. I refer you to the exhibit on page 3 of Tealbook, Part B, the constrained versus unconstrained monetary policy. I don't think anybody can study this and not see "policy failure" written all over it. The exhibit shows that if monetary policy were unconstrained by the zero bound, we could lower 2012 unemployment by over a percentage point relative to the baseline and put core inflation on a higher trajectory that comes closer to my price stability objective of 2 percent. Previous policy materials argued that this unconstrained policy path could be approximated by an appropriate program of quantitative easing. I think this is what we should aim for.

In order to justify not acting, it seems necessary to view this analysis as wrong, uninformative, or not actionable. Let's consider these. What if the class of models underlying this analysis is wrong? We had an extended discussion of that possibility last year when we talked about alternative approaches to inflation forecasting. However, my take-away from those discussions was that there are currently no credible alternatives that can compete with this

analysis. Everyone would welcome alternatives that can confront the data on an equal footing with a model like FRB/US. Where are they? If this is wrong, what model is right? I find this analysis credible.

What if this analysis is uninformative because the policymaker's objective function underlying the optimal policy simulations is misspecified? The analysis weights employment and inflation objectives equally. I think that makes sense, but even if a quasi-inflation nutter put four times more weight on inflation, an inflation rate of 3 percent in 2012 would contribute as much discomfort as the projected 7½ percent unemployment rate. And our current 9.5 percent unemployment rate causes as much discomfort as a 4 percent inflation rate. We talk about deflation. If inflation were zero, it contributes the same discomfort as if inflation were 4 percent. I believe this analysis passes the conservative central banker's sniff test.

Finally, and most importantly: What if there are no implementable policy alternatives that can deliver the Tealbook's unconstrained policy scenario, which is a thought experiment that allows negative interest rates? I've struggled with this. Although I have expressed reservations about diminishing returns from our quantitative easing policies before, our dual mandate failures are too large to ignore even what may be small improvements. If we take further aggressive actions on asset purchases and state our commitment to improving the employment and inflation trajectories, I suspect that investors will take at least some steps to seek higher returns, steps that will improve performance on both parts of our dual mandate. For example, banks will more quickly get to the point where they put less weight on recession-like perceptions of lending risk and begin to lend out their excess reserves.

In order to stop short of using more large-scale asset purchases of Treasuries, I would have to put substantial weight on the combined possibility that doing so would (1) lead to

sustained inflation rising as far above 2 percent as we are currently below that target now and (2) provide no improvement in the unemployment trajectory.

I'm not aware of a credible quantitative analysis that delivers such a prediction. I suspect that any outcome that brings inflation back to 2 percent will feature significantly increased levels of bank lending, which would be very good for our employment objective. If money growth is finally going to get inflation back to our target, broader monetary aggregates must increase, and that would include bank lending.

I've already used up a lot of time. If I had more time, I'd raise two other issues. One is quasi-price-level targeting under these circumstances. The other is the need for a heightened role for macro prudential regulation in this environment with large-scale asset purchases—that's very important. But I don't have that time. So, in sum, I favor an aggressively enhanced version of alternative A with substantial large-scale asset purchases of Treasury securities in addition to the current elements of alternative A. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. I walked in this morning, and my ID didn't work anymore. [Laughter] So I wondered whether this was a signal that it was time for me to move on. They got it fixed, so maybe there's hope for me yet.

I do not believe we should change policy at this meeting, and changing our reinvestment strategy is a change in policy. The language in the statement, from my perspective, does not clarify why we are doing so or what we think it will accomplish. Are we changing policy to pump up the economy and reduce the unemployment rate, as the newspapers will suggest? Or are we trying to guard against a deflationary risk? Our inability to communicate our rationale and our expectations clearly merely adds to the already high level of uncertainty in our economy

about fiscal policy and other things. We must not let ourselves be stampeded by the markets into taking an action, and we must take charge of what their expectations are of our action.

I have become increasingly concerned that we are trying to use monetary policy to address some very serious problems that are driving us away from our goals but that monetary policy is ill-equipped to solve. A number of us have stressed the nature of the very devastating shocks that have hit this economy—for example, shocks to employment and to bank lending—and the uncertainty it has engendered about the future. Monetary policy cannot solve those problems by itself.

I've stressed that our forecast for 2011 has hardly changed at all since January of this year. As President Lacker pointed out, the Tealbook's forecast for 2010 hasn't changed much since earlier in the year, if my memory serves me correctly. As President Hoenig stressed, policy should be focused on the intermediate- to longer-term trends. And despite the recent data and weak numbers, the forecasts for those longer-term trends have not budged very much over the course of the year.

I think Governor Kohn raised a very important point when he said, "We need to ask ourselves why the real economy hasn't responded more aggressively to our extraordinary willingness to act and provide accommodation." We don't fully understand the answer. So, what makes us think that making marginal changes in our reinvestment rate is going to have any effect on this very weak economy? It's the sort of fine-tuning mentality that I thought we gave up in the 1970s. I think the hope must be that, by changing something at the margin today, we are changing expectations that we are going to be much more aggressive in the future. And, yet, the longer-term forecast hasn't changed that much. So what is the justification for sending a signal where we think expectations are going to drive us to do a lot more than these fine-tuning moves?

According to the staff estimates, switching the reinvestment strategy is supposed to reduce longer-term rates by maybe 15 to 20 basis points, if that much. Longer-term yields are already at near record lows and down more than four times that much just in the last three months and just twice that much since the last meeting. As Bill English indicated, I am doubtful that we would get much of an effect from our reinvestment policy. Those effects were estimated in a period where the markets were impaired and disrupted, and I think markets are no longer impaired and disrupted, so I suspect the effect is going to be even less. In any case, do we seriously believe that moving the IOER rate down 10 basis points, or the longer-run rate down 10 basis points, is going to make any difference for this recovery over the next two quarters? Why do something that is not likely to help in any measurable way?

Moreover, from my view, such steps, which resemble the fine-tuning strategies of the past, are going to increase the public's expectation that monetary policy can solve all our economic ills, damaging our credibility regarding our ability to solve the challenges that we can in fact address. Households and businesses, as painful as it is, have real adjustments to make in response to the shocks we've experienced. Those adjustments will take time. They are painful, but monetary policy cannot speed that adjustment appreciably.

Our actions also have potential costs. Because they're likely to have little effect on the real economy in the near term, they will make us look impotent and put our credibility at risk at a crucial moment. Suppose inflation does turn out to be a serious risk? To combat it, we will need as much credibility as we can get, because, without that credibility, our policies will be much less effective in changing inflationary expectations. My view is that acting now to alter our reinvestment policy marginally will be seen primarily as an effort to boost the real economy and

lower unemployment, and it will fail. If we need to act more boldly to address deflation problems later, we will also be seen as not credible and potentially ineffective.

To me, the cost-benefit analysis of this sort of marginal move is not justified. If I were convinced the economy is currently at risk of sustained deflation—and I want to state that I'm a long way from being convinced of that—I would support taking aggressive action, perhaps purchasing large amounts of Treasury securities or moving away from the zero lower bound, as President Kocheerlakota suggested. But, in that case, we would need to explain in a direct and transparent way what we were doing and why we were taking these actions, and that we were doing so to guard against deflationary outcomes and to anchor expectations. Confusing that message by allowing the public to believe we're trying to shape the unemployment rate over the next two quarters seems to me to be the height of craziness.

For those who like to think of policy-setting in a risk-management environment, marginally reducing interest rates now wouldn't seem to buy us much insurance against tail risks. If we thought sustained deflation were an issue, it would seem that we would need to take much stronger actions to combat it, but I don't think we are there yet. Some may also think that we should change our policy to prevent our balance sheet from a mild contraction, yet we have never communicated to the markets that the precise makeup or size of our balance sheet was something that we were targeting. Some of us actually tried to argue that earlier on, but we were unable to come up with a way to articulate what the size of our balance sheet should be.

In fact, what we have done is stressed, to the contrary, that this increase in our balance sheet was done to address credit impairments. If we're now going to argue for a balance sheet target, we should clearly communicate what those arguments are and why our target is what it is.

This would be a huge communication challenge and, at this juncture, likely to create more confusion and uncertainty than the benefits are likely to provide.

I also fear that taking steps today runs the risk of conveying to the markets a sense of desperation; in addition, as I said earlier, I fear that it will create expectations of much more aggressive actions later on that may turn out not to be warranted. Thus, any change today may set in motion a set of expectations about future actions that we may come to regret, especially if the action fails to provide any useful relief to the unemployment picture in the near term.

This Committee has demonstrated over the last two years a willingness to act boldly when the data tell us to act. I think this proposal is a wimpy response to data that don't require action. Given the uncertainties of our forecast, reacting with a change in policy today to small and potentially transitory changes in our outlook strikes me to be the epitome of fine-tuning hubris. Thus, I was in favor of B2, "B classic," and I'm still in favor of it. I'm unhappy that it was removed. I don't believe that the current B, even if you took out paragraph 4, is a substitute for what I thought was B2.

We are currently not reinvesting payments on MBS, and I'm not in favor of changing our MBS redemption strategy at this time. I have repeatedly argued that I would like to move the composition of our balance sheet towards Treasuries, so I would like to reduce our MBS portfolio holdings. We hold a large share of that market and have already had trouble executing purchases we've undertaken. To me, standing pat and making as few changes in our signals to the public as possible is the right decision for today, based on both the economics and the communication challenges that it engenders. Any changes, I believe, are fraught with risks and the potential for misinterpretation. Thus, while I am not a voting member at this meeting, Mr.

Chairman, I respectfully say that if we adopt version B, as written, with paragraph 4, and if I were a voting member, I would dissent. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I support alternative B. In the minutes from the last meeting, we set ourselves a hurdle for considering new action, namely, that conditions had to have worsened appreciably, and, in my view, they have. I agree that the markdown of economic growth is not large—half of a percentage point in the second half of the year. But the recession was deeper and the output gap wider than anticipated. The unemployment rate was not exaggerating the lost output and the depths of the recession, and we've had confirmation of that. So, in my view, these factors—the slower growth, the larger gap—represent an appreciable worsening of my perception of the situation.

I think the worsening has occurred in the context of an already unsatisfactory track, as Charlie Evans and others have pointed out. I had already been finding it difficult to answer the question of why we weren't doing more with the forecast we had, let's say, in June, of very, very slow unemployment declines and inflation persisting below our objective for years on end; of course, this deterioration in the situation just makes it that much harder to explain. So I didn't find it an easy call, but, under the circumstances, I feel that just acknowledging the weakness in paragraph 1 is not an adequate response, and I favor reinvesting the proceeds of maturing MBS.

The volume of the prepayments, is getting noticeably large. An increase in the private absorption of that volume is likely to put at least some upward pressure on rates. In my view, that would interfere with the automatic stabilizing properties of the decline in interest rates that we see when weak economic news hits the market.

I agree with President Lacker that we need to keep our eye on both prices and quantities to judge whether monetary policy—defined in terms of longer-term interest rates—is being expansive or not. But if we look at credit, business credit in the first half of the year barely expanded—it grew at an annual rate of less than 1 percent—and household credit declined. The monetary aggregates aren't going anywhere—they've been flat. So I don't see the evidence that any decline in rates has been, in effect, an expansion of monetary policy. Rather, it has been a downward shift in the IS curve along a particular monetary policy path.

I prefer reinvesting the principal payments in Treasuries rather than MBS, because this allocation moves our portfolio in the right direction, as many have commented. I think it also helps with the functioning of the MBS market. If we reinvest in MBS, of course, we wouldn't be increasing our presence in the market, so we wouldn't be adding to the strains we're already putting on the market; but we would forgo the opportunity to allow additional issuance into that market, which might help its functioning.

I acknowledge that an action like this isn't going to have a very large effect. Nonetheless, I do think it will reduce the term premium a little through the portfolio balance effect, although 20 basis points is probably an overestimation. But I also think it will lower the path of expected short-term rates. So I wouldn't be surprised to see 20 to 25 basis points out of this action from both the portfolio balance effect and the expectational effect.

I would also suggest that this action could have an effect through channels other than lower interest rates, that is, easier credit and a lower cost of capital. It also could bolster asset prices. Presumably, stock prices would be higher, and house prices would be higher—indeed, whatever is discounted by these interest rates would rise. And there are other channels—for

example, the exchange rate would be lower. So there are a number of channels for monetary policy, and I think judging its effectiveness just by the decline in long-term rates is not sufficient.

I also acknowledge that interest rates aren't what's holding the economy back. President Plosser and I agree that it's a bit of a mystery. We've got a huge amount of stimulus out there. But we often use monetary policy to balance other factors affecting the economy. We raise interest rates to stop inflation when something other than monetary policy causes a shift in demand and causes output to rise beyond potential. We lower interest rates when something other than monetary policy is causing the economy to be weak and inflation expectations to go down. So it doesn't bother me that it's not monetary policy that's causing the weakness. I think the question we have to ask ourselves is whether we can use monetary policy, at least to some marginal extent, to offset whatever mysterious and not-so-mysterious factors are affecting the economy.

Is this the right response to a bad situation? I think we need to have a measured response to a somewhat worse, but not really terribly worse, outlook that says the Federal Reserve is paying attention. In other words, we recognize that the situation is a bit worse, not hugely worse, and we're on the job.

Is there a potential reputational effect if we do something and the economy still turns out to be poor? Sure. But when I thought through this decision, I tried to put myself—or, rather, put *you*—a year from now [laughter] and thought, “What would I regret more?” If I had a situation where the economy was just kind of tepid and moving along, and we had taken this action, and the economy was still just tepid—then, yes, people might say that policy wasn't that effective, and that probably is the truth. But I would rather at least have done what we thought we could do—a little bit, around the edges—where the benefits probably exceed the cost, than to have held

back and not done it. So I would have regretted more not trying what we could try than trying and not succeeding.

On wording issues, I like the new end of paragraph 1, “more modest in the near term than had been anticipated.” It suggests that we marked down our forecast, and I think most of us have. I confess to being the source of the bracketed language at the end of paragraph 2. I was influenced by two things. One is that it’s consistent with the forecasts of the FOMC participants at the last meeting. Second, I was influenced by Jim Bullard’s piece—the emphasis in that is on anchoring inflation expectations, and the bad outcome is when inflation expectations fall. As I thought about what we could do to communicate the fact that 1 percent inflation is not our long-term goal—because of the vulnerability to downward shocks—I thought inserting something like this might help communicate the idea that we weren’t satisfied with the current level of inflation, and it also might help to reinforce the anchoring of inflation expectations. I think I’ll stop there. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I support alternative B. I just want to say that we do have a policy tool—one that has theoretical support, and one that we’re all talking about—and that tool is shifts in the promise to stay low for longer. We can promise to stay low for a year or for 18 months or for two years, and, at least in the theoretical world, that’s supposed to work just fine as a policy tool.

My view is that we should not continue to react to negative shocks *solely* by promising to delay the date of policy rate normalization. My argument is that such a policy, as useful as it might be, also has some severe drawbacks, which I outlined in my paper. I advocate augmenting the near-zero rate policy with an enhanced quantitative easing policy, and I see alternative B as a

way to signal our intentions to defend our implicit inflation target on the low side and to avoid getting too close to a Japanese-type outcome here in the U.S. I think we need to send that signal at this juncture. We may not need to do more—I actually think the most likely outcome is that this turns out to be a rough patch in the recovery and that we do get better levels of economic activity going forward. But that remains to be seen.

I support paragraph 4 with the longer-term Treasuries provision. I think going with the MBS reinvestments would not be very effective at this point. Buying longer-dated Treasuries is likely to keep inflation and inflation expectations closer to target, even if the Committee is unlucky enough to face a new round of negative shocks. Also, a decision to go with Treasuries moves us closer to our longer-run goal of having a Treasuries-only portfolio. I think paragraph 4 indicates that we are willing to use balance sheet policy in a more state-contingent way, something that I have advocated repeatedly at these meetings. Also, if the recovery proceeds at a stronger pace than we currently anticipate, I think the reinvestment policy can simply be changed back to one that allows runoff or even outright asset sales, should inflation and inflation expectations pick up appreciably.

In paragraph 2, regarding the clause “at levels lower than are desirable in the long run,” I appreciate Governor Kohn’s explanation, but I actually read this a little differently. I would not include this. I think our action today has the potential, I hope, to move inflation and inflation expectations closer to target. This wording sort of suggests that our policy won’t be effective in doing that, so it’s a little counterproductive, possibly. But maybe I’m reading too much into it. I don’t have really strong feelings on this.

Let me make one last point, and then I’ll finish. Let me stress that I do not advocate a shock-and-awe policy, that is, a large purchase of Treasury securities all at once. That’s the kind

of thing that you should only do in a crisis environment, because a large purchase strategy is very risky—it can fall flat and end up damaging our credibility. My view is that the crisis atmosphere for that type of move has passed. Instead, I would advocate adopting a firm and determined asset purchase response, commensurate with risk levels as we judge them around the table, and then we can adjust our policy as appropriate going forward, both on the positive and the negative side. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. I favor alternative B without paragraph 4. I'm opposed to paragraph 4 of alternative B, because it recommends additional purchases of Treasuries. Why do people want to do these extra purchases? I think there are two reasons. One is that they're hoping to combat deflation or disinflation by doing this, and I don't think that this will be effective. I think the situation we're in right now with our monetary base is akin to something like the following. We've got a child and some cake. I think everyone around the table would be happy if the child ate one slice of cake, maybe even two slices of cake. But those of us who are worried about inflation are worried about the child eating a whole cake, and, actually, there are a dozen cakes in front of this child. This is the situation with reserves right now. We're talking about adding a 13<sup>th</sup> cake. It's not going to add much. I'm not worried about extra inflation risks from this 13<sup>th</sup> cake, but, at the same time I don't think it's going to have much effect on disinflation. The only thing I will say about this is that it's moving in the wrong direction. The right direction in terms of controlling inflation risk, making sure that, as President Lacker was saying, we're able to follow the right kinds of policies to ensure that we don't have undue amounts of inflation, is to shrink the balance sheet.

The other reason I think people are interested in doing this is that they hope it's a way to stimulate the economy. We are in a very poor situation in terms of the real economy—9½ percent unemployment and very high persistence in that rate. This is not a good situation. Unfortunately, while I agree that our purchase of nearly \$2 trillion of agency securities and Treasury debt drove down the term premium and served to stimulate the economy in late 2008 and early 2009, I don't think that further purchases now would be able to drive down the term premium. We were able to influence the term premium in that period because liquidity problems in the underlying markets made cross-market arbitrages difficult. Markets are not illiquid in 2010, so our ability to influence the term premium is going to be slight or nonexistent during this period.

I'll give you one teeny piece of evidence along these lines from the very recent past. As the Board staff's work acknowledges very clearly, the evidence we do have is largely based on the earlier period, when markets were impaired. On August 2, 2010, the difference between the 10-year yield and the 2-year yield was 243 basis points. On August 3, 2010, *The Wall Street Journal* online had an article on predictions about what we were going to do, and it essentially predicted that we might well engage in these kinds of purchases. On August 3, the difference between the 10-year yield and two-year yield fell from 243 to 241—two basis points. The next day it went back up to 242 basis points. So that release of information, in itself, which was a surprise to me—I can't say how much of a surprise it was to others—did not seem to have much of an effect on markets.

I think there's useful analogy to be drawn. I'd say we all agree that we cannot stimulate the economy effectively in 2010 by restarting the TAF or the CPFF. Those programs worked by improving impaired market function in 2008 and 2009, and those markets are not impaired in

2010. It's for exactly the same reasons that we should not be thinking we can stimulate effectively now by buying more Treasuries. Governor Kohn raised a great point about expectational effects, and I do agree that we should be able to have a stimulative impact by influencing people's forecasts of future short rates. But I would much prefer to do that through language as opposed to actual purchases of Treasuries.

What I hear around the table is a great deal of unhappiness with the state of the American economy, and I share that absolutely. But I think what we should be resisting is the view that the Federal Reserve is the right vehicle to fight this situation. We're not. If this is going to be fought, it's going to have to be done by somebody else—we're not the ones who have those choices to make. But there are tools available. There's work going on at the Minneapolis Fed about how we can mimic negative nominal interest rates through cutting consumption taxes that would stimulate consumption demand—that would be one way to proceed. But that's not our job. The right way to try to get around the fact that we're at the zero lower bound is through the use of other policy tools, not through monetary policy. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. I obviously would prefer something closer to option C. I don't see it on the table, so I won't wordsmith it. I would just say that the economy is improving—we keep saying that. I believe that if we allow ourselves to think far enough ahead, we can follow my proposal and explain to the public that we're leaving policy highly accommodative but away from zero; that is, it would be 1 percent over a period, then a pause while we see how the economy is doing, and so on. I think we can do it without shocking the economy or the public. To ease policy in an improving economy, as we are proposing here, is, I think, unwise.

And I do not support rolling over principal payments into Treasuries or anything else. We have an opportunity to allow our extraordinary easing policy from an earlier period to decline gradually on its own, without major disruptions to the market, and we're passing that opportunity up with the view that we're taking out an insurance policy. But I think of it more as planting the seeds of a briar patch that we will have to deal with not a year from now, but three or four years from now, as we have in the past. So I very much oppose this policy.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, in thinking of all the things I've heard around this table today—in addition to what I call “good news for Lutherans,” which is the economic growth that you're experiencing here in the D.C. area and the low unemployment rate in Minnesota—let me just mention two that are of concern to me.

One is the constant reference to the Japanese deflationary trap. For what it's worth, I have some familiarity with Japan, as I co-chaired on behalf of Prime Minister Hashimoto and President Clinton what was called the “U.S.–Japan Enhanced Initiative on Competition and Deregulation.” To be sure, there were monetary factors involved in the deflation trap, but there were also gross fiscal errors made by the Japanese government. One was raising the sales tax in 1997, and another was the inability to reform the banking system, because of what is known as “amakudari,” which means basically that the Bank of Japan and Ministry of Finance officials went back to the banks and influenced the authorities not to bring about the kind of reforms that we just brought about. I think the cumulative effect of those fiscal initiatives, as well as the monetary initiatives, was a consumer shift to perpetual thrift. So one point I want to raise a cautionary flag about is that we should be careful that we don't constantly refer to the United States falling into the Japanese deflationary trap. Our conditions are totally different. Yet, to be

sure, none of us do want to have deflation. And, to be sure, all of us want to see higher employment and lesser unemployment, more jobs for the American people. That's part of our mandate.

The other thing is that I heard the following statements made around the table: from Brian, "I don't think capital markets are imposing a constraint"; from Larry, "financial conditions appear slightly more supportive of economic growth than in June"; from Governor Duke, "loan growth does not seem to be constrained by capital, liquidity, or funding," or whatever the third descriptor was; from Governor Warsh, "credit has turned in the United States"; from President Lacker, "we have effectively eased." And then, of course, as was pointed out just now by President Kocherlakota—that we cannot depend on the Fed to solve all our problems. He also gave us a good discourse on the Beveridge curve, and that it was unlikely that monetary policy might shift unemployment because there had been a shift in the Beveridge curve. And then, lastly, from President Rosengren, "fiscal policy is a more effective tool."

I'm very worried, Mr. Chairman, that we are at risk of pushing on a string. We have done an awful lot. We have earned an enormous amount of credibility. I think we have been quite effective in what we have done. But I am worried about what signals we send when there is a question as to how much return we're going to get from the kind of policy that's advocated in alternative B. Will it be only 20 basis points, or 10 basis points, and at a time when there is, as we have seen through the testimony of people around this table, a significant amount of access to liquidity? Not only have rates come down in response to declines in the Treasury rates, but, very importantly, the spreads have narrowed, so that the issuance calendar for publicly traded corporations is quite high, and access to capital for those private companies is at least increasing, not decreasing.

I'm not a voter this time around. However, I would caution against adopting alternative B, with paragraph 4 in particular—I know this is a little bit cheeky, but it will make Bill Gross happy—and I don't think it is going to do much in terms of its effectiveness. In fact, it might do damage to our credibility, particularly if it comes to be viewed as our accommodating the fiscal authorities, who have to get it right. I think we're relying far too much on the Federal Reserve in this case. If anything, we're taking the pressure off the fiscal authorities to get their stimulative policies and their regulatory regime correct. Whether or not my reports from the private sector are sour grapes in terms of random refereeing, the fact is that we do have an inefficient fiscal response. If we're going to turn to the Japanese as an example, that's one of the causes of the situation they found themselves in. And I would be very hesitant to be an accomplice to not adopting the most efficient policy possible. And I do not believe that the course of action recommended in alternative B is the most effective course of action. But, having said that, I don't have a vote, and I just wanted to offer those views.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. As I approached this policy round, I thought in terms of three goals—first, recognition of the situation that's as accurate as possible; second, obviously, commitment to maintenance of a policy that is supportive of recovery; and, third, signaling readiness to act.

I have to confess to some ambivalence. I think some strong arguments pro and con have been made around the table related to alternative B with paragraph 4. I support alternative B. I think the weakening certainly does not justify C, and I'm concerned that alternative A—and there have been a couple of voices of support for alternative A—may be so preemptive that it could actually be alarming, and, therefore, be somewhat self-fulfilling. I base my policy

recommendation on my previous forecasts. The way the situation is playing out is not far from those forecasts—there may be some quarter-to-quarter intertemporal changes occurring, but it's pretty close to what I expected.

Coming into the meeting, I actually appreciated the choice between the status quo, B2, and B1, and I thought that was worthy of some discussion. I think we have to strike a balance between overreacting to the recent slowdown and deceleration of recovery and appearing to be clueless and, as Governor Kohn said, “not on the job”—that is, failing to acknowledge that there's some weakening going on and perhaps more downside risk.

So, with a little apprehension, I can support the policy action in paragraph 4. I have a preference for Treasuries. I actually view it as a signaling device. I think there's a lot of uncertainty regarding its effect, and I'm not sure its effect is the point. It's a signaling device, and, to me, it signals that, as Governor Kohn said, we're on the job, we're capable of acting. I also think it actually can, in some small ways, preserve the credibility that we developed during the 2008 and 2009 period. It would be confidence-supporting in that sense, and, by taking some small action, we may avoid a situation where the public—recognizing, perhaps, some of the constraints on the fiscal side—thinks that we're in an utterly helpless situation. I don't think we want that kind of atmosphere to develop. So I view it as tactically preemptive. I think we can reverse the policy if the circumstances change. It's the opposite of a tap on the brakes—it's a slight tap, in my mind, on the pedal. And I don't think we should overreact to the suggestion of a small change in policy, so I support alternative B. I think the “extended period” language remains appropriate, and I would hold that guidance.

I have a couple of small comments on the language. The first is more rhetorical, because I'm not pushing strongly, necessarily, for a change. I noted this time that there was more

comment on household deleveraging than I had heard in previous meetings. I wonder if, to be absolutely accurate in describing our view of the situation in paragraph 1, the list of constraints to household spending might not include reference to the continuing balance sheet adjustment and household deleveraging. I don't think it's necessarily recognized.

The second is about business spending on equipment and software. Comments have been made about some of the reasons that it's rising, that is, replacement as opposed to growth, and about the caution that's being applied to that kind of investment. So I wonder if a qualifier isn't required for the word "rising," for example, "rising somewhat" or "rising in the context of emphasis on replacement," or something that doesn't make it sound as positive as it appears to be in this paragraph. Those are my comments, Mr. Chairman. Thank you.

CHAIRMAN BERNANKE. Thank you. President Pianaalto.

MS. PIANALTO. Thank you, Mr. Chairman. I support alternative B. As I mentioned earlier, my outlook has not changed substantially over the intermeeting period. I have been anticipating weak economic growth and very low inflation, and the risks to my outlook have been skewed to the downside. Clearly, the economy remains far away from our long-term objectives, and I have strongly supported maintaining an accommodative monetary policy.

Time is probably the most essential element for the recovery. I think the Committee has recognized this with the use of our "extended period of time" language. During the last several months, we have seen financial markets respond to the incoming data in ways that indicate more people are becoming more aware of just how extended an "extended period" might prove to be. Over the last year, the Committee has generally expected the liftoff in the fed funds rate to come later than financial markets had anticipated. But, during the past few months, financial markets have pushed out substantially their expectations of when the fed funds rate would lift off.

Longer-term rates are exceptionally low, and, over time, if maintained, this should encourage an expansion of credit.

Nonetheless, with my balance of risk to output and inflation to the downside, I would like to guard against any passive tightening in monetary conditions engendered by the runoff in MBS. I realize that one feature of the policy environment is that prepayments accelerate somewhat as long-term interest rates come down, and that decline in long-term rates itself can be taken as evidence of some policy success. However, maintaining the size of the SOMA portfolio at its current level seems to me to be an appropriate insurance measure. So I think that we should take steps to keep the balance sheet from passively shrinking, and I think that we ought to do it in a way that results in a heavier concentration in Treasuries for all the reasons that the staff memo points out. Maintaining the SOMA holdings at their current level seems to be a reasonable and prudent measure that could prevent a sputtering economy from stalling. So I support the language in paragraph 4 of alternative B.

I also support including the language Governor Kohn proposed in paragraph 2 for the reasons that he articulated.

Because we have seen the financial markets extend their time frame for policy action from this Committee, I am persuaded that our statement language on the extended period of time is being interpreted sensibly. As such, I don't see a compelling reason to move away from that language. I realize that market expectations could change in the future, and I do see some value in having the kind of language that was presented in paragraph 3 of B1 at some time in the future, if we need it to signal with more clarity than I think is necessary today. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Governor Kohn knows the great affection that I have towards him, and he has done an excellent job today of making it harder for me to miss him when he's gone. [Laughter]

MR. KOHN. I'll keep trying.

MR. WARSH. He rightly stated that the burden on the Federal Reserve is to "take actions because we can." I must say that I read into his comments the view, which is a reasonable one, that there is dignity in failure—"we should try because we can."

MR. KOHN. Better to have loved and lost than never to have loved at all. [Laughter]

MR. WARSH. I must say, I honestly see no such dignity. We cannot afford to fail. We are the grownups in town. We are the last folks, rightly or wrongly, fairly or unfairly, in a global economy that demands institutional credibility, and we should be thinking long about the decisions that we make.

Governor Kohn today said that we should take a measured response, and I would ask you to think whether you think alternative B is a measured response or not. If alternative B were understood the way President Pianalto just described it—a maintaining of the current SOMA portfolio—that could well be a measured response to a markdown in the portfolio. That is not, in my judgment, how it will be understood. Looking at the language in the preceding paragraphs and ending with the language in paragraph 4, the understanding will be that we have decided that we must cross the Rubicon and get back into the Treasury markets. If that is the intent of my colleagues, well, then, that's one thing. But if, in fact, we view the decision to make a big purchase of Treasuries as having a high hurdle, and we are not yet convinced that the conditions allow us to clear that hurdle, then I think we run grave risks of misleading the public and misleading the pundits. They will take the music and lyrics incorporated in alternative B and

say, “I see. I see where they’re going, and this isn’t about a passive move that they’re making to restrain the tightening from the prepayments in MBS. This is a doubling down.”

Let me go to specifics. In paragraph 1, the changes are fine. I do think it’s a good scene-setter. I do think the paragraph accurately captures the views around this table about the downshift in the economy. I think it’s appropriate and expected.

In paragraph 2, I think the language that Governor Kohn proposed in brackets, in combination with paragraph 4, will add an exclamation point to our concerns not only about employment, but also about deflation risks, and I think it’s an exclamation point that it would be imprudent for us to carry on with today.

In paragraph 3, I am grateful for the changes over the past 24 hours. I think that language has come to work, and the idea that we would do harm to that policy reaction function with markets struck me as imprudent, so I think paragraph 3 is working as is.

So what about paragraph 4? If paragraph 4 were understood the way President Pianalto described it, if it were perceived as a one-off move that is not indicative of where policy is going to go, then, if we subject paragraph 4 to my benefit–cost test, I’d say, well, the benefits are really quite small, but they could be a few basis points, and the costs aren’t that big—after all, we’re already in the mortgage-backed securities market. But, as I said, I think that, as written, that’s not how paragraph 4 will be understood, given the various commentaries. I think it will be taken as indicative of a path of policy and as a low hurdle for increasing our Treasuries. I do not construe the hurdle as low. From what I heard in the first round today, I thought for many of you it was a relatively high hurdle, and I think it’s important that the minutes reflect the collective judgment of this group.

In light of where we are, given the time and divergence of views around the table, I would suggest that, by taking the proceeds from the accelerated prepayments in MBS and redeploying them in the MBS market, we will have the best chance of preserving our optionality, so that, come September, and subsequent meetings, if we determine that we need to go all-in, we will still have plenty of flexibility to do so. To go all-in now, I think would be an error, because, in my judgment, we do not have sufficiently rigorous analysis and understanding of how markets are going to take this Treasury purchase and of what we're going to do about it, which could then force our hands at subsequent meetings.

I must say, so what about this purchase of MBS? I am puzzled by the Desk's reference to the harm and dysfunction that could happen in the mortgage finance markets. I took it as a bit of jujitsu. I had been screaming about the harm and the dysfunction in the mortgage finance market since we initiated this program, and most of those views were dismissed. Now, we all learned from this experience. I'm sure that the mortgage finance market is subject to tons of dysfunction—Fed buying is not the least source of dysfunction in that market. If we reinvest our proceeds coming out of MBS and put them back into MBS, it won't be incrementally much more dysfunctional than it is with three banks originating 60 percent of all the assets, those being guaranteed by two GSEs effectively backed by the government with a large majority of the high coupons bought by the Federal Reserve. The incremental increase in dysfunction here is de minimis. So given the choice, and trying to bring some comity to our discussions, reinvestment in MBS strikes me as a more prudent alternative. And will the world say "Aha, they're keeping the portfolio as is, and they've maintained the flexibility to do more"? Sure, they will.

Why am I as allergic to Treasuries as I suggest today? First, I think the Treasury market is doing everything for us that we want it to do, and I don't know why we would want to call that

into question. Those markets are working well, not just in terms of market functioning but also in terms of prices. Second, I would say that before we get into this market, we should know with some degree of conviction where we want to go. I don't know myself, and I haven't heard tons of conviction from my colleagues. Finally, I would say that it does strike me that the Treasury market is a different market. It is special. It is perceived that way. And so I put an extra degree of caution on entering those markets, given where we are. So my proposal, Mr. Chairman, would be to use the agency MBS and the alternative bracketed language as a way to tone down and preserve optionality going forward. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. I am prepared to support alternative B, but I have real reservations about the actions in paragraph 4. I don't think I disagree at all with the comments about the outlook that have been expressed, but I think my reservation comes regarding estimates of how well the tools that are available to us will work and the threshold for using them. I don't think this action will alter either the outlook or the outcome in any appreciable way. So my reservation is not a concern about keeping our powder dry, but a concern that our remaining ammunition is much less effective than we can claim when its use is only in the potential.

In thinking about this, I'm reminded of the old admonition that I heed too infrequently which is, "it is better to be silent and be thought stupid than to speak and remove all doubt." [Laughter] Nevertheless, I'm going to continue. We are currently in a "silent" position, which I think is stronger, in that we can be perceived as having tools whose effectiveness may be debatable but that, in any case, we're reluctant to use, rather than the other position, namely, using the tools, finding that they're not effective, and removing all doubt about that.

In addition, I'm concerned about possible alternative interpretations of our actions. The rationale section in the Tealbook said that this would lead investors to believe that policymakers are less focused on exit and more concerned about spurring growth. I'd suggest a few interpretations that in my mind could be even more harmful to confidence than any positive result from the actions themselves. First, the press has tied this decision to the unemployment results, so it could suggest a reaction function that creates an expectation for expanded purchases to support employment whenever the results are weak. And I think the "to help support" language that begins paragraph 4 reinforces that. Second, because this announcement is going to be released without any updated projections, it could suggest a concern about the future that's even direr than our projections indicate and fuel suspicions that we now anticipate a double dip. And, finally, as I said, if the tools that we have do turn out to be pretty weak, it will prove them to be so and could undermine confidence in our ability to fight a more serious weakening in the outlook. We could yet face conditions that will force us to start using the remaining tools in our arsenal, but, because I read this more as a commitment to purchase \$400 billion in Treasury securities by the end of 2011, the threshold for making that decision is higher than the conditions in front of us. All that being said, I am prepared to support it.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. I can support alternative B for a lot of the reasons that Sandy and Kevin have already mentioned. First, it's important, to the maximum degree possible, that we emphasize through our communication strategy that alternative B can be understood not as a change in basic policy but instead as a recalibration of policy instruments to changes that have occurred in the world, one of which is the increasing runoff, which means that maintaining neutrality requires something different from what was required before. Second,

contrary to the projections of virtually everybody around the table early in the year, except maybe Kevin and me, the current economic situation is not where it was expected to be. Under these circumstances, it does seem to me important that we not, in fact or in perception, be tightening. Having said that, I think that Kevin identifies some important risks associated with the action, which is why I emphasize the communication strategy.

I do have a couple of additional comments. I was quite taken with Charlie Evans's comments, and I think he makes some powerful arguments that need to be considered seriously. In that regard, I'm a bit concerned that we've got yet another one-day meeting coming up, where we may not have the opportunity to examine at length some of the options that we may—and I underscore “may”—need to be considering over the coming several meetings. I know I'm putting words in Charlie's mouth, so he has perfect right to say I misunderstood him, but what I heard him saying was that we have an obligation to search for tools that will achieve both parts of the dual mandate. Now, when both parts of the dual mandate are not being achieved in the same direction, or for the same set of reasons, then the duty upon us is even greater to look for mechanisms, tools, and policy actions that will get us moving in the right direction on both parts of the dual mandate.

I have spared everybody around this table a disquisition on the legal implications of the dual mandate, which are, after all, included in Title 12 of the United States Code. But the time may be coming for that. I don't think it is adequate to say that we can't think of anything right now, so that's not something monetary policy can do. It is an abdication of responsibility, in my view, and it is inconsistent with the law to take that position.

I hope that we can develop some of the options that have been put on the table through the useful memos that Bill and Brian and their staffs have produced. I hope that we can consider

some variants on that, perhaps along the lines of things that Narayana and Jim have been saying for a while. For example, one possibility is doing more Treasury purchases over a given period of time but accompanying that with more sales of MBS, so we'd have a net increase in the balance sheet, but we'd actually be running down the holdings of MBS. I'm not proposing that, but there are a lot of variants that haven't yet been taken up, whose costs and benefits we haven't yet discussed, and I really do think it's important for us to do that.

With respect to the language itself, I have no problem with paragraph 1. I agree with Kevin that keeping paragraph 3 the way it is makes a lot of sense. I'd be more comfortable if paragraph 4 were phrased slightly differently, but I hope that we can trust to the Chairman's communication to fill some of that in, and the minutes will surely do so as well. I personally am somewhat attracted to the bracketed language in paragraph 2 "at levels lower than are desirable over the long run," because it removes any possibility of an inference that the last clause of the current paragraph 2 is to be taken as a good thing. But I don't feel strongly about it. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN DUDLEY. Thank you, Mr. Chairman. I favor option B. I believe the case for reinvesting the agency debt and MBS is very compelling. After all, if we don't reinvest, we're basically in a perverse situation. The weaker the economy and the lower long-term rates, the faster we allow our balance sheet to shrink as a result of the MBS prepayments, and that shrinkage of the balance sheet increases the duration we force on the private sector, limiting the scope for further declines in interest rates that would support economic activity. I don't see how that can be desirable in the current circumstances. I think we fell into this regime by accident, by circumstance. We see that there's a flaw with the current regime. This policy

action, in my mind, is fixing that flaw. That flaw was sort of latent a few months ago, when the economy looked better and interest rates were higher. But as the economy has weakened and as long-term rates have come down, the threat has gone from latent to something that's real. Our balance sheet will shrink quite rapidly over the next year or two at the current level of interest rates if we don't do something to offset that.

Now, regarding President Lacker's point—namely, that market participants are moving out at the long end and bringing down long-term rates, so that's quantitative easing being effective—I see that as a good thing, and I think the reinvestment amounts to not standing in the way of or inhibiting that. I think we want to encourage that as long as the unemployment rate is as high as it is and as long as the inflation rate is low.

Regarding Governor Warsh's point, I think the messaging is really, really important. I would much more favor a message that was on the side of saying that this is a small change to fix a flaw in our regime caused by the weaker the economy, the lower rates, etc., etc., rather than on the side of saying it's a new big policy initiative, because I don't really think things have changed that dramatically from the last meeting. I do believe that it's a big step to expand the balance sheet beyond where we are right now, so I think the messaging is really important. I think we can do that in the minutes, and I think the Chairman can do that in his discussions with the press.

In terms of what we should be reinvesting in, my view is it should be completely determined by what we think is going to be most efficient in terms of its effect on financial conditions; based on the Desk view, right now that's reinvesting in the Treasuries, but, two months from now, that might be reinvesting into agency MBS. So I'd want a decision to be based on the market as it evolves rather than a decision that's made for all time.

I'd also like to talk about how long we're going to do this. Is this program \$400 billion or \$600 billion? I have no idea. I think we're making the decision at the time based on our outlook today, and our aim is that we don't want to have a de facto tightening of monetary policy caused by weakness in the economy as our balance sheet shrinks. One meeting from now or two meetings from now or three meetings from now, we might decide that things had improved enough that we're going to allow the agency MBS to run off again. I don't think we should in any way lock ourselves in to how long this is going to last. We should do it based on the outlook and how things evolve going forward.

Regarding the language, in paragraph 2 I like Don's final gift to the Committee, "at levels lower than are desirable over the long run" for exactly the same reason that Governor Tarullo gave. It was always a little ambiguous before—"Inflation is likely to be subdued for some time." Well, "subdued inflation" is good as long as "subdued" isn't below the levels that you view as consistent with price stability. I think adding "at levels lower than are desirable over the long run" makes it very clear that we think inflation right now is too low, and I think that's a useful point to add to the statement. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. I will try to pull myself together here. Thank you for the comments. Despite the reservations and concerns I've heard around the table, I believe that the right step is alternative B, to reinvest in Treasuries. Let me try to explain why.

First of all, as I said, I don't think we're looking at monthly noise. I think there has been a weakening in the outlook, which might be acceptable, if everything were linear in the world, but my own belief is that there are nonlinearities, including the nonlinearity of policy, and I think that raises the risk of a truly unacceptable outcome, one that would have long-term consequences

for our labor force and for our economy. I think that it's quite a serious concern and that we need to pay attention to it.

Second, and this is what very much puzzles me about the discussion around the table, is that, even if you are a pure inflation targeter and don't give a damn about unemployment, we are too tight. All of our nominal variables are coming in below target—we are forecasting inflation that is too low. Again, I don't understand President Plosser's concern about fine-tuning—I think that any inflation targeting central bank, given the forecast we have, would try to find a way to ease policy. So that seems to me to be right from that perspective. For me, the difficulty has been rationalizing having both parts of our mandate falling short of the target on the same side. So, again, I don't understand that argument.

Regarding the argument that President Bullard has raised, which is to try to be proactive and to try to indicate our strong commitment, I think that will be helpful for confidence and for expectations. Let me add that I do believe that the effects of this policy will work through mechanisms over and above the 20 basis points—the estimate that keeps getting referred to. I think there are other financial channels. There are risk preference and term premium channels, potentially credit availability channels, confidence, expectations, and a variety of other things. This action may not be very effective, but I suspect that it will have some effect—we'll have to see.

Some people argue that we shouldn't do the reinvestment because it won't be effective, and some seem to be arguing that we shouldn't do it because it will be too effective. So I honestly am a little puzzled on that. It seems to me, as I said, that we are on the wrong side of our objectives, that we are to blame if we don't make whatever effort we can. Now, it may not work, but, if the economy is in near deflation six months from now, I would rather say that the

Fed did what it could to prevent it rather than saying the Fed stood around and let things happen. So there are errors in both directions and concerns in both directions, but I think we ought to try to do what we can do even if it isn't necessarily going to be fully effective or solve the problem.

That ties to the other question about the Fed not being in some sense the optimal agency to solve the problem. Clearly, we'd like to have better fiscal policy. Clearly, we'd like to have better regulatory policy. There are many things that we would like to see done better. Sure, the Fed cannot solve the problem. But it is, I think, incumbent upon us to do what we can do and, in particular, we are responsible for the inflation rate, and the inflation rate is evidently too low.

In sum, I guess I'm still not persuaded by the arguments I've heard, although I recognize that this is not without its risks, and, in particular, how it would be interpreted. I think Governor Warsh and President Fisher were correct that there were some expectational issues related to our earlier purchases of Treasuries. I think there are some risks there. On the other hand, to some extent we want to increase inflation expectations, so it's a tricky act, I have to admit. Therefore, having heard what people around the table said, again, my preference would be alternative B with Treasuries.

There was a lot of discussion about what this signals. I am becoming a Bullard acolyte in the following sense: The next time we do anything, I don't think we should go out and say, "Well, we're going \$400 billion of Treasuries." I think we ought to have a framework that says, "Here's our objective." And then we say that we're trying to achieve an inflation rate, or a price level target or a nominal GDP target or something, and that we are going to calibrate our purchases or sales in a way that tries to reach that target. That would create some structure, and that would take away this perception that periodically we're going to go out and do a shock-and-awe action. Having said that, I think that we really need to see how this works and what benefit

it has, if any. So barring some major change in the outlook—and I do want us to think about our tools, I do want us to think about our framework—I don't anticipate bringing another large step back to the Committee.

On the language in the statement, President Lockhart made a couple of suggestions, although, President Lockhart, you didn't really have specific language suggestions.

MR. LOCKHART. I just put them on the table more rhetorically because they're fine-tuning, and I don't think you need to follow up, Mr. Chairman.

CHAIRMAN BERNANKE. The second language issue that got a lot of attention was Governor Kohn's phrase at the end of paragraph 2. I have to admit that, given all that is happening, and given the concerns people have, I'm just a tad nervous about it, because it might signal more concern about deflation than we currently have. But I did hear a number of supporters. Governor, do you have any thoughts about that possibility?

MR. KOHN. I would defer to your judgment, Mr. Chairman. Given that we're adopting paragraph 4, if you're nervous about this phrase at the end of paragraph 2, I'd rather have you comfortable than have the phrase included. You can resurrect the phrase in October, perhaps, when you have another round of forecasts. I think it's an important point.

MR. BULLARD. Let me just reiterate that I think it hints that we really think inflation is going to stay pretty low, but what we're really hoping for is that this action will move inflation and inflation expectations somewhat higher.

CHAIRMAN BERNANKE. So you're in favor of not doing it?

MR. BULLARD. You might create more worries about deflation than we really think is warranted.

CHAIRMAN BERNANKE. That's fine. I guess that's my concern.

MR. BULLARD. Yes.

CHAIRMAN BERNANKE. Okay. If Governor Kohn will withdraw his suggestion, we'll drop that.

MR. KOHN. Sure.

CHAIRMAN BERNANKE. Otherwise, the only other change for Michelle's benefit is to make sure to take out the "alternatively" phrase in paragraph 4.

MR. KOCHERLAKOTA. Mr. Chairman.

CHAIRMAN BERNANKE. Yes. Sorry.

MR. KOCHERLAKOTA. I'm sorry at this late a date to make one more suggestion.

CHAIRMAN BERNANKE. Sure.

MR. KOCHERLAKOTA. It seemed that there was some notion that it would be better to think about this action as maintaining our holdings as opposed to suggesting a pattern of new purchases. Well, one way to reflect that in the statement would be to drop the opening clause of paragraph 4, "To help support the economic recovery in the context of price stability," and instead start with "The Committee will maintain the Federal Reserve's holdings of securities."

CHAIRMAN BERNANKE. I think we need some motivation.

MR. KOCHERLAKOTA. The preceding three paragraphs certainly provide a lot of motivation.

MR. LACKER. How about "To maintain," as the motivation.

MR. KOCHERLAKOTA. Yes.

VICE CHAIRMAN DUDLEY. I don't know. I think it's not a very powerful phrase.

CHAIRMAN BERNANKE. How about “To maintain its current level of monetary policy accommodation, the Committee will hold the Federal Reserve”—no. “The Committee will”—

MR. TARULLO. “To maintain the current level of monetary policy accommodation.”

CHAIRMAN BERNANKE. To keep?

MR. WARSH. To keep constant.

CHAIRMAN BERNANKE. To keep constant the Federal Reserve’s level of monetary policy accommodation? Is that better?

VICE CHAIRMAN DUDLEY. I think that’s risky.

MR. FISHER. Be careful.

MR. ROSENGREN. It’s keeping constant the holdings. I don’t know what it’s doing to the accommodation.

VICE CHAIRMAN DUDLEY. The accommodation could change depending on a whole bunch of other things.

CHAIRMAN BERNANKE. How about something a little bit more balanced between recovery and price stability?

MR. WARSH. Mr. Chairman, if you leave the first phrase as it is, and then, instead of “maintain,” because we’re trying to strengthen that a little bit, we might say “The Committee will keep constant the Federal Reserve’s holdings.” I know that means “maintain,” but “keep constant” sounds a little bit more affirmative to me. It sounds a little more like this is a discrete act about making sure we deal with this a bit.

CHAIRMAN BERNANKE. That’s okay, but you would drop the initial phrase?

MR. WARSH. I don’t know how you do that. Again, I would say this is just a nuance.

CHAIRMAN BERNANKE. Okay.

VICE CHAIRMAN DUDLEY. The first phrase is pretty neutral—of course we’re trying to help support the economic recovery.

CHAIRMAN BERNANKE. All right.

MR. FISHER. Well, that’s what it says in the other part.

CHAIRMAN BERNANKE. “To help support the economic recovery in a context of price stability, the Committee will keep constant the Federal Reserve’s holdings of securities”? Is that okay?

MR. KOCHERLAKOTA. Fine with me.

MR. FISHER. By reinvesting.

CHAIRMAN BERNANKE. Did you get that Michelle?

MS. SMITH. Got it.

CHAIRMAN BERNANKE. Any other suggestions? [No response.]

CHAIRMAN BERNANKE. All right, recognizing that I don’t have the full support of the Committee, I’m nevertheless going to propose alternative B with the emendations already made. Would you call the roll, please, Matt?

MR. LUECKE. Yes. This vote will cover alternative B as on page 3 of this handout with the changes suggested, that is, without the last phrase in paragraph 2 and with the addition of the words “keep constant” instead of “maintain” in paragraph 4, as well the directive on page 7 of the same handout.

Chairman Bernanke	Yes
Vice Chairman Dudley	Yes
President Bullard	Yes
Governor Duke	Yes
President Hoenig	No
Governor Kohn	Yes

President Pianalto	Yes
President Rosengren	Yes
Governor Tarullo	Yes
Governor Warsh	Yes

CHAIRMAN BERNANKE. Okay. Thank you. The next meeting is Tuesday, September 21—it's another one-day meeting. It will be followed by our conference on financial regulatory reform that President Lacker and Governor Tarullo have been working on. The FOMC meeting is now concluded. The Board meeting will reconvene once we have our lunch to discuss the centennial. Thank you.

END OF MEETING