Meeting of the Federal Open Market Committee on
June 24–25, 2008

A joint meeting of the Federal Open Market Committee and Board of Governors of the Federal Reserve System was held in the offices of the Board of Governors in Washington, D.C., on Tuesday, June 24, 2008, at 2:00 p.m., and continued on Wednesday, June 25, 2008, at 9:00 a.m. Those present were the following:

Mr. Bernanke, Chairman
Mr. Geithner, Vice Chairman
Mr. Fisher
Mr. Kohn
Mr. Kroszner
Mr. Mishkin
Ms. Pianalto
Mr. Plosser
Mr. Stern
Mr. Warsh

Ms. Cumming, Messrs. Evans, Lacker, and Lockhart, and Ms. Yellen, Alternate Members of the Federal Open Market Committee

Messrs. Bullard, Hoenig, and Rosengren, Presidents of the Federal Reserve Banks of St. Louis, Kansas City, and Boston, respectively

Mr. Madigan, Secretary and Economist
Ms. Danker, Deputy Secretary
Mr. Skidmore, Assistant Secretary
Ms. Smith, Assistant Secretary
Mr. Alvarez, General Counsel
Mr. Baxter, Deputy General Counsel
Mr. Sheets, Economist
Mr. Stockton, Economist

Messrs. Connors, English, and Kamin, Ms. Mester, Messrs. Rolnick, Rosenblum, Slifman, Tracy, and Wilcox, Associate Economists

Mr. Dudley, Manager, System Open Market Account

Ms. J. Johnson,[1] Secretary, Office of the Secretary, Board of Governors

Mr. Cole, Director, Division of Banking Supervision and Regulation, Board of Governors

Mr. Frierson,[1] Deputy Secretary, Office of the Secretary, Board of Governors

[1] Attended portion of the meeting relating to the supervisory report concerning investment banks and related policy issues.

Ms. Bailey,[1] Deputy Director, Division of Banking Supervision and Regulation, Board of Governors

Mr. Clouse, Deputy Director, Division of Monetary Affairs, Board of Governors

Mr. Parkinson,[1] Deputy Director, Division of Research and Statistics, Board of Governors

Ms. Barger,[1] Deputy Director, Division of Banking Supervision and Regulation, Board of Governors

Mr. Blanchard, Assistant to the Board, Office of Board Members, Board of Governors

Mr. Struckmeyer, Deputy Staff Director, Office of Staff Director for Management, Board of Governors

Mr. Stehm,[1] Associate Director, Division of Reserve Bank Operations and Payment Systems, Board of Governors

Messrs. Reifschneider and Wascher, Associate Directors, Division of Research and Statistics, Board of Governors

Mr. Gagnon,[2] Visiting Associate Director, Division of Monetary Affairs, Board of Governors

Mr. Wright, Deputy Associate Director, Division of Monetary Affairs, Board of Governors

Mr. Zakrajšek, Assistant Director, Division of Monetary Affairs, Board of Governors

Mr. Erceg,[2] Assistant Director, Division of International Finance, Board of Governors

Mr. Oliner, Senior Adviser, Division of Research and Statistics, Board of Governors

Mr. Gross,[1] Special Assistant to the Board, Office of Board Members, Board of Governors

Ms. Tevlin,[2] Senior Economist, Division of Research and Statistics, Board of Governors

Mr. Ammer,[2] Senior Economist, Division of International Finance, Board of Governors

Ms. Beechey, Economist, Division of Monetary Affairs, Board of Governors

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[1] Attended portion of the meeting relating to the supervisory report concerning investment banks and related policy issues.
[2] Attended portions of the meeting through the policy vote.

Ms. Dykes, Project Manager, Division of Monetary Affairs, Board of Governors

Mr. Luecke, Section Chief, Division of Monetary Affairs, Board of Governors

Ms. Beattie,[1] Assistant to the Secretary, Office of the Secretary, Board of Governors

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

Ms. Hughes,[1] Staff Assistant, Office of the Secretary, Board of Governors

Mr. Barron, First Vice President, Federal Reserve Bank of Atlanta

Mr. Fuhrer, Executive Vice President, Federal Reserve Bank of Boston

Messrs. Altig, Angulo,[1] Rasche, Schweitzer, Sellon, and Weinberg, Senior Vice Presidents, Federal Reserve Banks of Atlanta, New York, St. Louis, Cleveland, Kansas City, and Richmond, respectively

Messrs. Fernald and Fisher, and Ms. McLaughlin, Vice Presidents, Federal Reserve Banks of San Francisco, Chicago, and New York, respectively

[1] Attended portion of the meeting relating to the supervisory report concerning investment banks and related policy issues.

Transcript of the Federal Open Market Committee Meeting of June 24-25, 2008

June 24, 2008—Afternoon Session

CHAIRMAN BERNANKE. Good afternoon, everybody. Why don't we begin, as usual, with the Desk report and Bill Dudley. Bill.

MR. DUDLEY.[1] Thank you, Mr. Chairman. I'm going to be referring to the handout that you should have in front of you. Financial markets have become more resilient to bad news in recent weeks. Although the news associated with several important groups of financial intermediaries—including investment banks, commercial banks, and the monoline insurers—has not been favorable, contagion has been limited compared with some of our earlier experiences during the past year. Moreover, the types of vicious feedback loops that were evident, for example, in early March have been largely absent more recently.

Despite this, much of the news has not been good. Looking first at the U.S. equity and credit markets, a good portion of the improvement that occurred in the run-up to the April FOMC meeting has been unwound recently. The broad U.S. equity indexes are only marginally above their low points reached in mid-March and the price of the Standard & Poor's 500 financial sub-index has fallen to a new trough (exhibit 1). In contrast, corporate credit spreads have held on to much of the gains achieved after mid-March. As shown in exhibit 2, the spreads on both investment-grade and high-yield corporate debt have been quite stable recently. However, as shown in exhibit 3, corporate credit default swap spreads have widened over the past few weeks.

Most of the major investment banks have continued to struggle. As shown in exhibit 4, the share prices of the four remaining independent U.S. investment banks remain depressed. Further write-offs, capital-raising (which is increasing the number of common share equivalents outstanding), and investors' concerns about the consequences of deleveraging on long-term profitability have all been important factors weighing on share prices. In contrast to this poor equity-price performance, credit default swap (CDS) spreads remain much narrower than at the time of Bear Stearns's demise in mid-March (exhibit 5). The establishment of the Primary Dealer Credit Facility and the Federal Reserve's role in the acquisition of Bear Stearns by JPMorgan Chase are undoubtedly both important factors behind the divergence of equity prices and credit default swap spreads. Lehman Brothers, which reported a second-quarter loss that was considerably larger than expected, has been under the most stress. However, in contrast to Bear Stearns's experience in mid-March, Lehman's short-term financing counterparties have generally proved to be patient. The financing backstop provided by the Primary Dealer Credit Facility has been cited by many counterparties as a critical element that has encouraged them to keep their

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

financing lines to Lehman in place. The investment banks have begun to rapidly deleverage their balance sheets. As shown in exhibit 6, the gross leverage ratios for Lehman Brothers, Goldman Sachs, and Morgan Stanley all fell sharply in the second quarter. This stands in marked contrast to the rise in leverage ratios that persisted through the first quarter of this year.

Regional banks have also come under considerable strain recently. Deterioration in their construction lending, commercial real estate, and residential mortgage books has caused many banks to raise their loan-loss provisions sharply. Potential acquirers of troubled regional banks have been discouraged by the accounting requirement that these banks must mark down the assets of the bank that they're acquiring to the current market value at the time of the acquisition.

The financial guarantors have also been under stress. Both Standard & Poor's and Moody's recently downgraded Ambac and MBIA. The Moody's downgrade of MBIA was particularly sharp—five notches to A2 from AAA. These downgrades of the monoline guarantors have a number of important implications. First, the firms that have purchased protection from Ambac and MBIA will have to take significant write-downs. Citigroup, Merrill Lynch, and UBS appear to have the largest exposures to these two firms. Second, the ability of Ambac and MBIA to establish new AAA-rated subsidiaries that would enable them to write new municipal bond insurance is increasingly in doubt. Most likely, these firms will be forced to go into runoff mode in which they can no longer write new business. Third, the financial resources of these firms will be strained by the downgrades. For example, MBIA said that, as a result of the downgrades, it may have to pay out $2.9 billion to satisfy certain contracts and post up to $4.5 billion of additional collateral. Fourth, the risk of a default or a restructuring event by a major monoline guarantor could potentially unsettle the CDS market. As shown in exhibits 7 and 8, the share prices of the monolines have continued to slide, and their credit default swap spreads have risen further. As has been the case for some time, there remains—even after the credit rating downgrades—a big disconnect between the CDS spreads of these firms and their credit ratings.

Despite these rating downgrades, the effect on the municipal securities market has been muted compared with the turmoil evident in the first quarter. Put simply, much of the adjustment in the short-term municipal market—for example, the demise of the muni auction rate securities market and the restructuring of many variable rate demand notes (VRDN) and tender option bond (TOB) securities, has already taken place. Although the yields on the VRDNs wrapped by Ambac and MBIA have increased sharply, up to now much of this paper has been remarketed rather than put back to the liquidity providers. The effect on the municipal bond market has been even more subdued. As shown in exhibit 9, the ratios of 10-year and 30-year municipal yields to comparable Treasury yields have risen only slightly recently and remain well below the peaks reached in mid-March. Investors have already been looking through the credit ratings of the monoline insurers to the quality of the underlying tax-exempt issuer.

The performance of term funding markets also suggests a greater resilience to bad news. Subsequent to the May expansion of the TAF auction sizes and the increase in the foreign exchange swap lines with the European Central Bank and the Swiss National Bank, one-month and three-month LIBOR–OIS spreads have narrowed significantly (exhibits 10 and 11). The decline in term funding spreads is particularly noteworthy because it stands in contrast to the widening that occurred in the last month of the three preceding quarters—September, December, and March. The increase in the size of the TAF auctions has also been associated with a decline in bid-to-cover ratios. Also, as shown in exhibit 12, the spread between the stop-out rate and the minimum bid rate has been relatively low. In contrast to the U.S. auctions, the bid-to-cover ratios in the ECB and SNB auctions have risen sharply over the last three auctions (exhibit 13). This likely reflects several factors including (1) a reduction in the willingness of U.S. banks to lend at term to European banks—due mostly to balance sheet constraints and (2) strategic bidding behavior. As you recall, the ECB auction is a noncompetitive auction with the stop-out rate determined by the TAF auction. As a consequence, increasing the bid size in the ECB auction will not raise the price that the banks will have to pay, and that encourages more bidding in the ECB auctions. This strategic bidding explanation, however, is undercut by the fact that European banks have also been strong bidders in both the TAF and the SNB auctions. The introduction by ICAP of a competing measure of bank funding costs—the New York Funding Rate (NYFR)—has mostly bolstered the credibility of LIBOR. The NYFR rates have consistently been within 1 or 2 basis points of LIBOR. However, it is unclear how much this conformity reflects the accuracy of LIBOR. It is possible that the NYFR respondents use LIBOR as a benchmark for their own responses, since LIBOR comes out earlier in the day than when they have to respond.

Demand for the term securities lending facility (TSLF) auctions has also generally been subdued. Only one of the last nine auctions has been fully subscribed. This mainly reflects the convergence in Treasury and non-Treasury repo financing rates. Following the first TSLF auction, Treasury repo rates rose sharply. Given the minimum bid rates for the schedule 1 and schedule 2 auctions of 10 and 25 basis points respectively, the convergence in repo rates has eroded the economic appeal of the TSLF auctions as a funding vehicle. The $80 billion of the single-tranche repo program has been more attractive as a source of funding. Moreover, the PDCF backstop has made investors more willing to finance the non-Treasury collateral held by the investment banks and other primary dealers, and this has also reduced the demand for TSLF borrowing.

The continued rise in commodity prices has been another important market development. As shown in exhibit 14, both energy and agricultural prices have been rising sharply. Although the weakness of the dollar has often been cited by analysts as a causal factor behind the surge in commodity prices, the recent rise in energy and food prices has been accompanied by a slightly stronger, rather than weaker, dollar (exhibit 15). Nevertheless, short-term movements in the dollar and oil prices do appear to have become more closely linked over the past few years. Exhibit 16 plots the six-month rolling correlation between the weekly change in the spot price of West Texas intermediate crude oil and the weekly change in the value of the trade-weighted dollar. As can be seen, these price changes have become increasingly negatively correlated in recent years. Of course, correlation does not imply causality. Even if there is causality, it is unclear in what direction the causality runs—from commodities to the dollar or from the dollar to commodities. Although many factors are undoubtedly at play, a couple of possible explanations that have made the rounds may be worth considering. First, higher oil prices swell the dollar reserves held by the oil-producing countries. Because these countries may respond to this dollar influx by selling dollars to diversify their foreign exchange reserve holdings, traders may sell dollars in anticipation. Second, trade data suggest that the composition of import demand from the oil-exporting nations is skewed away from the United States, and this may also weigh on the dollar.

The rise in commodity prices has fanned anxieties about inflation. As shown in exhibit 17, the University of Michigan consumer sentiment survey measures of one-year and five-to-ten-year inflation expectations have increased recently. In contrast, both Barclays' and the Board's five-year, five-year-forward measures of breakeven inflation have moderated a bit since the last meeting. These measures remain well inside the ranges evident over the past year (exhibit 18). The anxiety about higher commodity prices and inflation has been an important factor behind the sharp shift in monetary policy expectations. As shown in exhibits 19 and 20, the federal funds rate and Eurodollar futures curves have continued to shift upward since the April FOMC meeting. As shown in exhibits 21 and 22, our survey of primary dealer expectations also shows an upward shift in the expected path of the federal funds rate target. However, compared with the expectations embodied in futures prices, the rise has been more modest. As a result, the gap between the average of the dealers' forecasts and the market's forecast has continued to increase and is now unusually wide. The divergence between the dealers' forecasts and market expectations and the wide range of the dealers' forecasts one year ahead indicate that there is considerable uncertainty about the future path of short-term rates. This uncertainty is also evident in the fact that the implied volatility of short-term interest rates is unusually high currently.

The tightening expected over the next year is not anticipated to begin soon. As shown in exhibits 23 and 24, options on federal funds rate futures contracts currently imply that market participants expect that the FOMC will stand pat at both this and the August FOMC meetings. Although considerable tightening is priced in over the next year, this is not unusual at this stage of the monetary policy cycle. Assuming that we are at the trough of the current rate cycle, the magnitude of tightening expected over the next year is not significantly greater than what has been priced in following other troughs in the federal funds rate target. Tomorrow we will be eight weeks beyond what may turn out to be the onset of the trough in the target rate. As shown in exhibit 25, the roughly 125 basis points of tightening that is currently priced in over the next year is comparable to what was anticipated at the same point after the federal funds rate trough in 1992.

> Finally, a few words about the Primary Dealer Credit Facility. (Art Angulo will talk about this in more detail tomorrow.) We have been actively managing our counterparty risk in this facility and have made it clear to market participants that this should be viewed as a backstop facility rather than as a core source of funding. By the end of next week, borrowing from this facility is likely to drop sharply because of two events. The first is this week's closing of the Bear Stearns–JPMorgan Chase transaction, which will result in the elimination of Bear Stearns's PDCF borrowing. The second is the anticipated closing next week of the Bank of America acquisition of Countrywide, which is expected to eliminate Countrywide's PDCF borrowing. In the absence of new financial shocks that could provoke renewed funding difficulties, we would anticipate little persistent PDCF borrowing after these mergers are completed.
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> Last week I sent you a memo informing you of our plans to initiate a euro time deposit with the Netherlands Central Bank, subject to Regulation N approval by the Board. There were no foreign operations during this period. I request a vote to ratify the operations conducted by the System Open Market Account since the April FOMC meeting. As always, I am very happy to take any questions.

CHAIRMAN BERNANKE. Thank you, Bill. The quarter-end premium seems less this time, but am I correct that the dollar premium is higher than the euro and pound premiums?

MR. DUDLEY. It is a bit higher, yes.

CHAIRMAN BERNANKE. Is there anything to be inferred from that?

MR. DUDLEY. About 225 basis points are priced in for our dollar turn—maybe 150 basis points or 175 basis points elsewhere—but those are pretty small differences measured over just a couple of days. So I wouldn't read too much into it. The reality is that the European banks are structurally short of dollar funding, and so that may be why there is a little more upward pressure on dollar rates over the quarter-end.

CHAIRMAN BERNANKE. Other questions for Bill? President Lacker.

MR. LACKER. Yes. I notice that in chart 18, in your TIPS-implied average inflationary plot to the ten-year horizon, you omit the Markets Group's estimate. Is that because of skepticism on your part that leads you to judge it as inferior or an overabundance of humility? [Laughter]

MR. DUDLEY. The latter, of course. [Laughter]

MR. LACKER. It does, of course, show a slightly different trend, right?

MR. DUDLEY. It actually has increased a bit. But I have consistently shown just the Barclays and Board measures over the past few months, so this is not “pick and choose.”

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. Bill, by inference, talking about the Primary Dealer Credit Facility, two of the limited number of borrowers have been the two institutions you mentioned. Have there been many more or just one or two?

MR. DUDLEY. There have been more borrowers than just them. Some have done it because they wanted to test the facility. Some have done it because they viewed it as a fairly advantageous cost of funding. You know, there have been quite a few different borrowers, but those two borrowers mentioned are the ones that I would view as more persistent than desired.

MR. FISHER. Thank you for discreetly answering the question.

CHAIRMAN BERNANKE. Other questions? President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. Just to follow up on that question, I was at a meeting in New York not too long ago and was talking with some people on Wall Street. They suggested that for the primary dealers there was stigma attached to borrowing from the PDCF. I wasn’t quite sure what to make of that, and I just wondered if you had any observations or comments about whether you thought that was real or perceived, or is there an interpretation I should give to that?

MR. DUDLEY. I think there is some stigma attached to the Primary Dealer Credit Facility. It is hard to know exactly how much. One thing I thought was interesting: The first week the facility was outstanding, a number of institutions went to the Primary Dealer Credit

Facility and then announced that they were doing it as a test. Now, presumably you wouldn't announce that you were doing it as a test if there were no stigma associated with the facility. But I would judge that it is clearly less stigmatized than the Primary Credit Facility, probably because it doesn't have the history that the Primary Credit Facility has. The fact is that it is an advantageous rate or was an advantageous rate several weeks ago, and there were some institutions that were borrowing from the facility just on the basis of rate—so that suggests less stigma than the discount window.

MR. PLOSSER. Thank you.

CHAIRMAN BERNANKE. President Stern.

MR. STERN. Yes. Bill, on chart 6, just a quick question on the leverage ratio: Do we know how good those data are? I mean, to the best of our knowledge, is that reliable stuff?

MR. DUDLEY. This is just assets divided by equity, so I think it is pretty good. When the investment banks start proposing their adjusted leverage ratios, then I think you have a problem—you know, apples and oranges—because the different investment banks calculate those kinds of adjusted leverage ratios a bit differently. Usually you see two leverage ratios—one that is gross and another one that excludes the matched book—and the leverage ratio falls pretty significantly when you exclude the matched book.

VICE CHAIRMAN GEITHNER. Mr. Chairman? President Stern, I have just one thing to add. For the first time with the three investment banks that reported for the quarter that ended in May, the SEC allowed them to disclose their risk-weighted ratio on the SEC's version of Basel II. That's the ratio for which your question is more germane in some sense because it shows a pretty significant cushion of capital against risk-weighted assets. The question is, How good are those measures of risk-weighted assets? This is a subject for discussion tomorrow, but part of our problem is that we have much less confidence in judging the integrity of what goes into those measures of risk—not to mention whether the risk weights are any good, which is a harder thing for the market to judge. But for the first time the market can see what their risk-weighted measures are, at least on an SEC basis, which is pretty close to Basel II, and those ratios were, if I recall correctly, north of 10, tier 1, for the three that reported—significantly higher than they were on March 1, by their own measures.

MR. STERN. Thanks.

CHAIRMAN BERNANKE. Other questions? If not, would someone move the ratification.

MR. KOHN. So move.

CHAIRMAN BERNANKE. Without objection. Thank you. Okay. Let's turn now to the economic situation. Nathan, I'll start with you.

MR. SHEETS.[2] Thank you, Mr. Chairman. Given that developments in global commodities markets have continued to have influential effects on our forecast for domestic activity and prices, we felt that it would be useful for me to lead off with the international portion of the chart show, which will include a discussion of these markets. Following my remarks, Larry and Bill will present our outlook for the U.S. economy.

As shown in the top panel of your first exhibit, total foreign real GDP growth (line 1) stepped down from an average pace of 4½ percent in the first three quarters of 2007 to around 3 percent in the fourth quarter of last year and the first quarter of this year. We see growth abroad as likely to decline to 2.2 percent in the current quarter and to pick up only slightly in the second half of the year. Next year, with the expected firming of U.S. activity and diminishing headwinds from the financial turmoil, foreign growth should rise back to a 3½ percent pace. Growth abroad was just a bit stronger in the first quarter than we had anticipated, but the composition of that growth came as more of a surprise. Canadian GDP (line 3) posted a slight contraction, reflecting a continuing downturn in exports and stagnant investment. In contrast, the pace of activity in Japan (line 4) and the euro area (line 5) was much more vigorous than we had expected, including a 6¼ percent surge in Germany. Nevertheless, recent data for these economies point to much weaker growth in the second quarter. As shown in the middle left panel, Japanese manufacturing output

[2] The materials used by Messrs. Sheets, Slifman, and Wascher are appended to this transcript (appendix 2).

has declined recently, and labor market conditions have softened. For the euro area (the middle right), various indicators are showing weakness, including retail sales and the purchasing managers' index. As highlighted in the bottom panel, growth in the emerging market economies is expected to step down over the next few quarters but should remain relatively resilient, especially compared with the weak performance of these economies during the U.S. recession earlier this decade. Many of the EMEs were particularly vulnerable to the high-tech- and manufacturing-led downturn that occurred at that time, and fundamentals in the EMEs are now stronger than was then the case. In addition, Chinese domestic demand has remained quite robust of late, and this has likely helped to support growth in emerging Asia.

As shown in the top left panel of exhibit 2, oil prices have continued to soar with the spot price of WTI closing yesterday at $136 per barrel. The far-dated futures price has climbed to about the same level. Our forecast for the path of oil prices is now roughly $50 a barrel higher than at the time of the January chart show. Divining the causes of this staggering rise in oil prices is no doubt ground on which angels fear to tread, but we continue to assert bravely that the primary driver of higher oil prices is constrained (and price inelastic) oil supply coupled with relatively strong (and price inelastic) oil demand. These deep features of the oil market—along with stressed geopolitical conditions in many oil-producing countries, rising production costs, and concern about the reliability of medium- to long-run supply—have sent oil prices spiraling upward.

As shown in the last column of the middle table, the increase in oil prices appears to have contributed to modest declines in oil consumption in the advanced economies, including the United States (line 3). But oil consumption has continued to move up in the emerging market economies, especially in China (line 5) and the Middle East (line 6). Consumers in many EMEs have been shielded from rising prices by government fuel subsidies. The economic and fiscal costs of such subsidies are becoming increasingly burdensome, however, prompting some countries (including China late last week) to allow domestic fuel prices to move toward world levels. As seen on the top right, oil inventories in OECD countries have declined over the past year and a half. Unfortunately, little information is available about the behavior of inventories outside of OECD countries.

The bottom left panel shows that the rise in global oil production since 2004 has significantly lagged the expansion of world GDP (weighted by oil consumption); indeed, production has remained relatively flat during most of that period. Notably, however, the lack of oil production is not due to geological constraints. Data on years of proved reserves (shown on the bottom right) are at roughly the same level as a decade ago. But those reserves are now concentrated in areas where production is constrained by acute geopolitical risks, uncertainty about property rights, inadequate investment, and high production costs.

Turning to your next exhibit, nonfuel commodity prices have also risen significantly on average since your last chart show, with most of the increase coming in the first few months of the year. Here, too, we believe that the elevated level of prices is a result mainly of strong and sustained global demand, lagging supply responses, and rising production costs. Consistent with this observation, inventories of key commodities, shown in the middle left panel, have trended down in recent years. It bears emphasizing, however, that nonfuel commodity prices certainly have not moved in lockstep with each other. As seen in the bottom left panel, the price of corn has surged to new highs, supported by ethanol demand and, more recently, as adverse weather in the Midwest has endangered a substantial fraction of this year's crop. In contrast, the price of wheat has fallen back from its recent peak, as improved growing conditions in Australia seem likely to boost supply. For metals, the price of zinc has moved down significantly since its peak in late 2006, as new smelters have come on line. The price of copper has moved sideways—but at a high level—over the past two years, as prospective increases in supply have not yet materialized.

A number of other explanations for the recent run-up in oil and other commodity prices have also been advanced, including the possibility that increased purchases by "speculators" in commodity futures markets may be playing an important role. Given the magnitude of the financial flows into these markets, we are hesitant to slam the door completely on this explanation, but our work finds little supporting evidence. As noted on the top right, prices of a number of commodities that are not traded in futures markets have also risen substantially. Second, a sustained increase in demand by investors would suggest that inventories should be rising; instead, as I have noted, inventories are now relatively tight. Finally, we see no evidence that the positions taken by noncommercial traders in futures markets actually predict commodity prices; for example, such positions for light sweet crude oil on the New York Mercantile Exchange have been roughly flat since mid-2007. Two other frequently cited explanations for the rise in commodity prices are the depreciation of the dollar and declines in interest rates. The middle-right panel shows the correlation of the broad nominal dollar with oil prices and with an index of nonfuel commodity prices. Both correlations are negative over most of the sample, implying that depreciations of the dollar have tended to happen at the same time as rises in commodity prices. While these correlations have become more negative since mid-2007, they remain within the ranges seen in recent years, and interpreting the direction of causality for this relationship is difficult. Also, as Bill noted, the dollar has been relatively stable over the past several months, but oil prices have continued their upward climb. Similar plots of correlations of interest rates with commodity prices (shown on the bottom right) are quite noisy and fail to point to any clear conclusions.

As shown in exhibit 4, the run-up in commodity prices has continued to lift headline consumer price inflation in both the advanced foreign economies and the emerging markets. We expect that inflation abroad will remain elevated in the near term but eventually move back down as slower global growth reduces pressures on resources and as commodity prices flatten out (consistent with quotes from futures markets). Of course, one clear risk to these projections is that commodity prices may, yet again, confound our expectations and continue rising. Another risk is that the high rates of inflation now being recorded may become embedded in inflation expectations. As shown in the top right panels, measures of long-term inflation compensation have recently edged up in the euro area and increased more markedly in Canada. In recent weeks, major foreign central banks have intensified their inflation-fighting rhetoric. Notably, the ECB has warned that it may raise rates at its next meeting; and in the United Kingdom, Mervyn King—in his letter to the Chancellor—underscored his determination to ensure that inflation remains contained. As shown on the bottom left, we now assume that both the ECB and the Bank of England will raise rates in the second half of this year, compared with the near-term cuts we had anticipated in the April Greenbook. In addition, we now see the Bank of Canada keeping policy on hold. In the emerging market economies, including Mexico and China (the bottom right panel), increases in inflation have largely been driven by rising food prices, which account for a substantial share of consumer expenditures. Policymakers in the EMEs have taken steps to slow the rise in food prices, with some countries introducing price controls and export bans on agricultural goods. But officials have also relied on more-orthodox policies to combat inflation, including raising policy rates and hiking reserve requirements. Indeed, over the intermeeting period, monetary policy was tightened in a range of emerging market economies, including Mexico, Brazil, China, India, Russia, and Hungary.

As shown in the top left panel of exhibit 5, the path of the broad real dollar is now just a little weaker than we anticipated at the time of the January chart show. We continue to expect the dollar to depreciate at an annual rate of 3 percent through the forecast period, reflecting persisting downward pressures associated with the current account deficit. This depreciation is projected to come largely against emerging market currencies (including the Chinese renminbi), which have moved less since the dollar's peak in early 2002. It's safe to say that core import price inflation (on the right) has come in substantially higher than we projected in January. Incorporating the BLS monthly data for April and May, we now see core import prices in the second quarter surging at an annual rate of 10½ percent, the fastest rise in two decades. This increase, which comes on the heels of an 8 percent jump in the first quarter, was heavily concentrated in material-intensive goods and suggests a much more rapid and, perhaps, stronger effect from the run-up in commodity prices than we saw in the past. Conditional on nonfuel commodity prices flattening out, core import price inflation should decline to less than 2 percent next year.

Finally, summing up what these developments mean for U.S. activity, we now see the contribution from net exports to U.S. real GDP growth (line 3 in the table) as likely to exceed 2 percentage points in the second quarter, as exports expand at a smart pace (supported by the lower dollar) and imports contract sharply. This marked weakness in imports reflects both a steep drop in real oil imports and a continued decline in imports of core goods (reflecting sluggish U.S. GDP growth and rising prices of imported commodities). The positive contribution from net exports moderates to ¾ percentage point in the second half of this year and to ½ percentage point in 2009. While the pace of export growth is projected to remain strong, at above 7 percent, imports should gradually accelerate as the U.S. economy recovers. Larry will now continue our presentation.

MR. SLIFMAN. Last week, the *Washington Post* ran a front page story with the headline, "Why We're Gloomier than the Economy." Like the author of the *Post* article, we too have noticed the difference between what people are saying about the economy in surveys and what they apparently are producing and spending.

Starting first with the survey indicators, the top left panel of exhibit 6 plots the plunge in the Michigan index of consumer sentiment, which is far deeper than can be explained by its usual predictors such as labor market conditions, inflation, and the stock market. The panel to the right plots two of the most timely surveys of business attitudes, which continue to suggest that the respondents are pessimistic about overall business conditions. Meanwhile, as shown in the middle left panel, although private payrolls continue to shrink, the declines have been much smaller than we were expecting and, as you can see from the shaded area (if you look very closely), [laughter] much smaller than the ones that occurred during the last recession. In terms of spending data, the most striking piece of news was the upward revision to earlier retail sales figures. At the time of the April Greenbook, real outlays for consumer goods other than motor vehicles appeared to be moving sideways (the red line in the middle right panel). However, the black line shows that according to the latest estimates—which, of course, are still subject to additional revisions—spending rose rapidly in March and April and climbed further in May. With these numbers, we revised up appreciably our near-term estimates of the growth rate of real PCE goods other than motor vehicles (the inset box).

On the business side, the bottom left table, shipments of nondefense capital goods, excluding transportation, rose further in April, and new orders jumped. In addition, outlays for construction of nonresidential buildings, the bottom line of the table, continued to climb in April. All told, these indicators suggest stronger business spending than we had anticipated in our April forecast. A potentially important downside development may be emerging in the motor vehicles sector—the bottom right panel—where, according to our industry contacts, sales of light vehicles appear to be plummeting in June. Whether this is just a reaction to the surge in oil prices that will be contained within the auto sector or whether it's a canary in the coal mine pointing to something far more serious for the entire economy remains to be seen. But it certainly has grabbed our attention and highlights a downside risk to our projection.

Exhibit 7 focuses on the overall GDP forecast through 2009 and some of the key factors that informed our thinking about the outlook. We had a lot of moving parts to deal with this round, and the upper panel summarizes how we put them together. First, in light of the incoming information, we revised up our forecast for the first two quarters of this year, especially the second quarter. We now think that real GDP growth came in at an annual rate of 1.1 percent in the first quarter and picked up to a 1.7 percent pace in the second quarter. As you know, earlier this year we put in some judgmental adjustments to the forecast, which reflected a combination of the tendency for negative model residuals to be correlated during cyclical downturns as well as the macro effects of financial turmoil and uncertainty that are not well captured by our models. We have interpreted some of the recent spending surprise as suggesting that we went too heavy on such effects in the April Greenbook, and so we have tempered them in this projection. That said, we still anticipate that some of these influences will show through to spending, especially in the household sector, and we expect the economy to be on a very subdued growth path for the next few quarters.

As I will discuss shortly, residential investment is still projected to be a drag on economic growth well into next year. Moreover, with house prices expected to fall through the end of next year, the ratio of household net worth to income remains on a downward trajectory, reducing some of the wherewithal for consumer spending. Household purchasing power also is being held down by the surge in oil prices that Nathan discussed (the middle left panel). As shown in the inset box, by our reckoning the increases in the spot and futures prices of WTI since the April Greenbook subtract about ¼ percentage point from real GDP growth in both 2008 and 2009, with much of the effect working through PCE. Despite these negative influences, if the story ended here, the economy still would be operating with a somewhat higher utilization rate—that is, a smaller GDP gap—than in the April Greenbook. In light of this consideration, as well as the less favorable outlook for inflation that Bill will discuss, we have conditioned this forecast on a tighter path for monetary policy than the one in the previous Greenbook. As you can see in the middle right panel, by the end of next year the federal funds rate is 100 basis points higher than in the April Greenbook. I should note here that we also have raised our estimate of the growth rate of potential GDP, which Bill will discuss shortly. Because we view our revised estimate of potential as merely the staff's catching up with what individuals and firms were already expecting, these revisions result in corresponding adjustments to the growth rate of real GDP going forward.

All told, as illustrated in the bottom left panel, after increasing substantially faster in the first half of the year, real GDP is now projected to grow at an annual rate of ¾ percent in the second half of 2008, a bit less than in our previous projection. In 2009, real GDP is expected to increase 2.4 percent, about ½ percentage point less than in the April Greenbook. The bottom line of the forecast is perhaps most easily seen by the path of the GDP gap. As shown in the bottom right panel, the gap starts out the projection period being much narrower than in the April forecast. By the fourth quarter of 2009, however, the gap is essentially the same as in the April Greenbook.

After that high-altitude flyover of the projection, the next two exhibits swoop down for a closer look at some of the details. Exhibit 8 focuses on the housing sector. With demand weak, the overhang of unsold new and existing single-family homes—the vacancy rate—has soared, putting downward pressure on prices. As shown to the right, the OFHEO purchase-only index of house prices fell at an annual of 6.7

percent in the first quarter of 2008, and we expect home prices to continue declining around this pace into next year.

Anecdotes and common sense suggest that many prospective homebuyers, leery of purchasing an asset whose value is falling, are waiting for house prices to bottom out before entering the market. This behavior further saps already sagging housing demand. We don't have direct survey evidence for this supposition; however, the middle panels present some suggestive numbers taken from the Michigan survey. First, as shown by the black line in the panel to the left, the share of current homeowners who think the price of their home fell over the *past* 12 months jumped dramatically through early this year and remains elevated. In addition, the share that thinks the price will fall over the *next* 12 months also has drifted up. The panel on the right, which is based on work by my colleague Claudia Sahm, looks at the views of renters. Here the blue bars show the percentage of renters in the Michigan survey who say that now is a bad time to buy a house. The red line plots an estimate of house price overvaluation derived from a price–rent model that we follow. As you can see, as houses became increasingly overvalued, more and more renters became pessimistic about homebuying—apparently for affordability reasons. Of course, relative prices are not the only influence on affordability. General macroeconomic and credit market conditions also are important. Thus, even though the extent of overvaluation has diminished so far this year, renters, at least thus far, remain quite pessimistic about homebuying conditions.

So what brings us out of this seeming death spiral? If house prices follow the expected trajectory, we estimate that they will move into rough alignment with their long-run relationship with rents early next year and then, as typically happens, overshoot somewhat. As the market returns to something closer to equilibrium, prospective homebuyers who had been waiting out the price bubble in rental quarters should begin to see housing as more affordable and be more willing to buy into owner-occupied housing. As that happens, the rate of decline in house prices should slow, and sales of single-family homes (the bottom left panel) should start to improve. With demand improving and the inventory overhang being worked off, we expect housing starts to level out and then begin to gain altitude slowly in 2009.

Exhibit 9 presents the medium-term outlook for consumer spending and business investment. Starting with PCE, real spending is projected to fall, on balance, in the second half of this year. Tax rebates push up the third quarter and create a pothole in the fourth quarter as rebate-related spending drops off. More fundamentally, spending is held back by the effects of higher oil prices on household purchasing power, the ongoing hit to household wealth from falling home prices and earlier declines in equity prices, and the restraining effects of financial turmoil and unusually pessimistic consumer sentiment. In 2009, spending picks up as many of these factors begin to improve; but at 1½ percent, the increase is still rather tepid.

The middle panels focus on business outlays for equipment and software. Real spending on the high-tech component (the green bars) has slowed sharply this year and is expected to remain relatively soft throughout the projection period. The major U.S. computer manufacturers—such as HP, Dell, and Sun—have expressed caution about the outlook for sales. Meanwhile, capital spending guidance from telecommunications service providers points to a slowing in their outlays for communications equipment. As shown by the blue bars, investment outside the high-tech segment has been declining at a modest pace since late last year, and we expect it to contract further over the next year and a half. Spending is held back by normal accelerator effects, tight lending standards, and gloomy business sentiment.

For nonresidential structures, the lower panels, the BEA reported that outlays in the drilling and mining component (the green bars) dipped in the first quarter. Anecdotal reports suggest that this may have reflected bottlenecks stemming from shortages of skilled labor and supplies. However, recent data on footage drilled and the number of drilling rigs in operation have picked up, signaling a near-term rise in spending. Looking forward, escalating energy prices are likely to spur continued increases in investment. In contrast, as shown by the blue bars, real construction spending for buildings is projected to be very weak following sizable increases in 2006 and 2007. The evolving supply-and-demand factors for this sector are almost uniformly downbeat: Vacancy rates are moving up; sales and prices of existing properties are sagging; and financing conditions are tight for new projects. Because of these developments, we expect outlays in this category to fall throughout the projection period. Bill will now continue our presentation.

MR. WASCHER. Exhibit 10 reviews our assumptions about aggregate supply. As you can see from the first two rows of the table at the top, we now assume that potential output growth will hold steady at about 2½ percent per year over the forecast period, about ¼ percentage point per year higher from 2007 to 2009 than we had assumed in the April Greenbook. This upward revision is split roughly equally between structural productivity growth (lines 3 and 4) and trend hours (lines 5 and 6).

The middle two panels provide the reasoning for our change. The left panel shows the difference between actual productivity growth (the black line) and a simulation from our standard model (the green line) using the pace of structural productivity growth that we had assumed in April. As you can see, labor productivity growth in recent quarters has been stronger than the model would have expected given the deceleration in economic activity. As shown in the inset box, a purely statistical model based on a Kalman filter would have responded to the recent data by raising its estimate of structural productivity growth 0.2 percentage point. Because we place less weight on data that have not yet been through an annual revision, we generally tend to revise our own estimate by less than the amount suggested by such models; moreover, the Kalman filter model does not take into account the steep rise in energy prices, which we think might subtract a bit from structural productivity growth in coming years. Nevertheless, we did think it appropriate to nudge up our productivity growth trend a little. The green line in the middle right panel shows a similar model simulation for the labor force participation rate, again using our previously estimated trend. Here, too, the incoming data have been a little higher than the model would have expected. One can think of potential explanations for this—for example, it may be that strains on household budgets associated with rising costs of food and energy have increased labor force participation among secondary earners, an influence not captured by the model. We are not ready to back away from our basic story that demographics will continue to put downward pressure on the participation rate over time, but we did slightly raise our assumed trend in response to the recent data.

The key elements of the labor market forecast are shown in the bottom panels. As indicated to the left, nonfarm payroll employment (the black line) is projected to decline about 40,000 per month through the rest of this year. As the economy improves in 2009, we expect payrolls to start rising again, although at a pace below our estimate of trend employment growth (the green line) for most of the year. As shown in the inset box in the bottom right panel, we expect the unemployment rate to drop back in June from its suspiciously high May reading, which would leave the average jobless rate in the second quarter at 5.3 percent. However, with employment declines projected to continue for a while longer, we expect the unemployment rate to drift up to 5.7 percent by early next year and remain near that level through the end of 2009.

Exhibit 11 presents the near-term inflation outlook. As you can see in the top left panel, the recent data on consumer prices have come in a little lower than we had expected at the time of the April Greenbook. As shown on line 3, core PCE prices rose only 0.1 percent in April, and based on the latest CPI and PPI readings, we expect an increase of 0.2 percent in May. As a result, we have marked down our estimate of core PCE inflation in the second quarter by 0.3 percentage point, to an annual rate of 2 percent. Total PCE prices (line 1) have risen at a substantially faster pace than core prices; but here, too, the current-quarter forecast is a little lower than in our previous projection, both because of the lower core inflation and because the sharp increases in oil prices have been slow to feed through to finished energy prices. Despite this recent news, we expect inflation to rise sharply over the next few months. In part, this reflects our judgment that core prices were held down in the first half by some factors that will not persist into the second half. In addition, as shown to the right, we expect increases in food and energy prices to push up the twelve-month change in the total PCE price index more than 1 percentage point over the next several months, to about 4½ percent.

The remaining panels of the exhibit focus on the projection for energy and food prices. As shown by the black line in the middle left panel, rising crude oil prices have pushed up retail gasoline prices sharply so far this year. Even so, margins are still relatively low, and we expect further sizable increases in pump prices in coming months. Spot prices for natural gas (the red line) have also risen noticeably, reflecting its substitutability with crude oil. Meanwhile, prices for crops, plotted in black at the right, have moved well above the levels at the time of the April Greenbook, mainly in response to the severe flooding in the Midwest. The higher prices for grains have also pushed up livestock prices (the blue line), although recent increases in supply have tempered this rise somewhat. In both cases, futures prices indicate that market participants expect these prices to flatten out at about their current levels. The bottom two panels show our forecast for overall consumer food and energy prices. Based on current futures prices, we expect energy price inflation to move yet higher next quarter before slowing to a pace close to zero in 2009. We expect food prices to show a similar—albeit less pronounced—pattern, with the four-quarter change peaking at about 5 percent this quarter and then decelerating to a pace of 2½ percent next year.

The upper panels of your next exhibit examine the implications of the recent increases in energy and other commodity prices for core inflation. The first thing to note is that these increases are showing through to producers' costs. As indicated in the top left panel, the producer price index for core intermediate materials (the black line) has accelerated yet again and was up more than 7 percent over the past twelve months, with especially large increases for metal products and energy-intensive materials. Likewise, the diffusion index for prices paid from the Institute for Supply Management's manufacturing survey (the red line) has climbed steadily since late last year. As Nathan noted, rising commodity prices have been an important source of the sizable increases in import prices shown to the right. In addition, higher energy prices have boosted the costs of shipping goods from manufacturers to wholesalers and retailers. As you can see in the middle left panel, the PPIs for both trucking and rail transport have accelerated sharply over the past year or so. Obviously, a key question is the extent to which these higher costs will be passed through to core consumer prices. The panel to the right provides rough estimates of the size of these pass-throughs from our suite of econometric models, with the effect of energy prices on core PCE inflation shown by the blue bars and the combined effects of import prices and other commodity prices indicated by the red bars. As you can see, these effects add more than 0.6 percentage point to our forecast of core inflation this year. With energy and import prices expected to decelerate, the contribution of these factors to core inflation steps down to ¼ percentage point next year.

In contrast to the evidence of greater cost pressures from commodity prices, we've seen no signs of acceleration in labor costs. The bottom left panel plots the three main measures of labor compensation that we follow. None of them suggests that employers have experienced a step-up in the pace of compensation growth; and given the weaker labor market in our projection, we don't think that workers will do much better over the next year and a half either. Accordingly, we expect the rise in trend unit labor costs, shown in the table to the right, to hold steady at about 2 percent per year over the projection period.

In putting together our forecast, we've also had to make some decisions about how to interpret the recent data on inflation expectations—the subject of your final exhibit. As shown in the top left panel, some measures of short-run inflation expectations have jumped sharply in response to the run-up in energy and food prices this year. In particular, the Reuters-Michigan measure of one-year-ahead expectations (the blue line) rose above 5 percent in May and remained high in the preliminary June survey. Meanwhile, as shown to the right, indicators of long-run inflation expectations have ranged from roughly unchanged to higher since late April. As I already noted, the recent compensation data do not suggest that higher inflation expectations have started to push up wage increases. However, on balance, we view the data as consistent with a slight updrift in the underlying long-run inflation expectations that drive actual inflation, and we have carried this updrift into the projection period. All told, we expect core PCE inflation (line 3 of the middle left table) to step up to a 2½ percent annual rate in the second half of this year, pushed up by the effects of higher input costs and the increase in inflation expectations. In 2009, core inflation is projected to step back down to 2¼ percent, as the effects of decelerating energy and import prices and a wider unemployment gap offset a small further updrift in expected inflation.

We have taken only a small signal from the apparent deterioration in expected inflation, but we view the possibility that inflation expectations will become unmoored in response to the persistently high rate of headline inflation as a risk to our forecast. Accordingly, as indicated in the box to the right, we included in the Greenbook an alternative simulation that assumes that long-run inflation expectations move up ¾ percentage point relative to baseline in the third quarter. Consistent with our usual practice, monetary policy in this simulation is assumed to respond according to the estimated Taylor rule. Both wages and prices are affected by these higher inflation expectations, and as you can see by the green line in the middle panel at the bottom, core inflation rises to 2.6 percent in 2009, almost ½ percentage point higher than baseline. Monetary policy responds in this simulation by raising the federal funds rate more than in the baseline forecast. As a result of this additional tightening, the unemployment rate declines a bit more slowly, and core inflation moderates to about 2¼ percent in 2012. Brian will now continue the presentation.

MR. MADIGAN.[3] I will be referring to the separate package labeled "Material for Briefing on FOMC Participants' Economic Projections." The top two sections of table 1 show the central tendencies and ranges of your current forecasts for the first and second halves of 2008; central tendencies and ranges of the projections published by the Committee this past April are shown in italics. To facilitate comparisons, the Greenbook projections are shown in the bottom section.

In your forecast submissions, most of you indicated that you saw appropriate monetary policy as entailing a path for the federal funds rate that lies above that assumed in the Greenbook. As shown in the first row, first column, of table 1, the central tendency of your real growth forecasts for the first half of 2008 has been marked up substantially since April. However, a number of you noted that recent upside surprises to consumer and business spending are likely to prove transitory and that falling house prices, tight credit conditions, and elevated energy prices will probably restrain growth over the remainder of 2008. Accordingly, some of you revised down a touch your growth expectations for the second half of this year (the second column) especially those of you who had previously anticipated the briskest

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

growth rates, as indicated by the downward revision to the upper end of the range shown in the middle section. Most of you think the economy will skirt recession. Nonetheless, your projections for the speed of recovery over the second half exhibit considerable dispersion: Four participants are projecting growth rates of real GDP between 2 and 2¼ percent, whereas an equal number are calling for growth at an annual rate of only around ½ percent, a pace similar to the one projected in the Greenbook, with many of you attributing the tepid growth partly to financial headwinds. The tendency for some clustering of your second-half growth forecasts at the extremes can be seen by noting the similarity between the central tendency and the range. As shown in the second set of rows in the top panel, your projections for headline PCE inflation in the second half of 2008 have been revised up more than 1 percentage point, to around 3½ to 4¾ percent, largely as a result of the surge in prices of energy and agricultural commodities. However, in view of better-than-expected news on core PCE inflation, the central tendency of your projections for core inflation during the second half (shown in the third set of rows) revised up only 0.1 percentage point.

Looking ahead to 2009 (table 2, the middle column), you continue to expect growth to pick up as the drag from the housing sector dissipates and credit conditions ease. The midpoint of the central tendency of your forecast for real GDP growth next year is 2.4 percent, the same as in April and the same as the staff's current forecast. Your growth forecasts for 2010 (the third column) are a shade lower than in April, and the central tendency of your forecasts for the unemployment rate is a touch higher, perhaps because a number of you assumed more policy tightening over the forecast period in order to counter heightened inflation pressures. The midpoint of the central tendency of your projections for the unemployment rate edges down from about 5½ percent in 2009 to about 5¼ percent in 2010. Your commentaries suggest that many, albeit not all, of you view those rates as a quarter-point to a half-point above your estimates of the NAIRU. The third and fourth sets of rows indicate that most of you see overall and core inflation staying above 2 percent next year; but by 2010, the extended period of economic slack and the assumed leveling-out of energy prices push down overall and core inflation to around 1¾ to 2 percent; for core inflation, the central tendency and range are a touch higher than you forecasted in April. For the first time since you started these projections last October, the upper end of the range of your projection of total inflation in 2010 exceeds 2 percent, albeit marginally. Thus, many of you project that, at the end of the forecast period, the economy will still be operating with some slack and real output growth will be slightly above the growth rate of potential. The continued presence of slack suggests that you anticipate that inflation will continue to edge lower in 2011 and, given the assumption of appropriate monetary policy, implies that you typically anticipate that inflation will still be a bit higher in 2010 than you see as consistent with price stability.

Exhibit 3 presents your views on the risks and uncertainties in the outlook. As shown by the green bars in the top two panels, a large majority of you continue to perceive the risks to growth as weighted to the downside (the left panel), and many judge that the degree of uncertainty regarding prospects for economic activity is unusually high (the right panel), although the number of you seeing uncertainty about growth as elevated has declined slightly over the first half of the year. In your narratives, you attributed the downside risks primarily to the potential for steeper declines in house prices and persisting financial strains, which through a further tightening of credit conditions could exert an unexpectedly large restraint on household and business spending. Although your views of the risks regarding growth have shifted only modestly, the distribution of your perceptions of the risks regarding inflation (shown in the bottom two panels) has changed significantly so far this year. As shown in the lower left panel, about three-quarters of you now see the risks to the outlook for overall inflation as skewed to the upside. In your commentaries, you typically pointed to continued increases in energy and food prices and an upward drift in inflation expectations as the main reasons for the upside risks to inflation. In addition, as shown to the right, the number of participants who perceive the degree of uncertainty regarding the inflation outlook as larger than usual has risen considerably.

Turning to exhibit 4, as I noted, your projections suggest that you do not see the economy as having fully settled into a steady state by 2010. The dynamics of the economy evidently are such that, following moderately large shocks, it can take quite a few years to converge back to steady state, a view that is captured by many econometric models such as FRB/US and is also reflected in the current Greenbook forecast. Thus, the three-year forecast horizon currently used by the Committee does not necessarily allow your forecasts to reveal fully your views of the steady-state characteristics of the economy and your views of the rate of inflation consistent with the dual mandate. Recognizing this, the Subcommittee on Communications recently sent the Committee a memo outlining several possible approaches to providing longer-term projections. The approaches are summarized in the lower panel.

One option would be for participants to extend their entire set of projections out to, say, five years. Under this option, participants would be asked to submit projections for economic variables in year 4 as well as in year 5. You would also expand your individual forecast narratives to explain the trajectory of the economy and inflation over the five-year projection period. This approach would have the advantage of providing the basis for a complete presentation of the Committee's medium-term and long-term views. The principal disadvantage of this option is the relatively heavy burden it places on Committee participants to make projections covering five years. Another disadvantage is that in some circumstances—that is, following a very large shock—the economy still may not be in a steady state after five years.

A second option is for participants to continue to submit economic projections and narratives out to three years as now but also to provide estimates of the values of output growth, unemployment, and inflation in year 5 under the assumption of appropriate monetary policy. Under this approach, you might wish to collect and publish long-term projections only for output growth, unemployment, and total inflation, and not for core inflation, in order to emphasize that total inflation rather than core inflation is the appropriate metric for the longer-run goal of price stability. This second approach presumably places less demand on your time than the first but it would make for a less integrated presentation. It would also suffer from the same defect as the first approach, in that the figures you submit might not reveal the steady-state characteristics of the economy after a large shock.

In a third approach, you would augment your three-year projections with projections of the average values for output growth, unemployment, and total inflation over the period five to ten years ahead. This approach would have the advantage of more directly revealing your estimates of the key operating characteristics of the economy—that is, the parameters related to productive capacity and your inflation objective. It might also be less demanding of your time in the sense that you would need to project fewer time periods than in the first option. On the other hand, it might be more difficult in that you would need to consider likely trends in demographic variables and productivity further ahead than is ordinarily necessary for monetary policy making. Moreover, it is possible that some of the parameters you would be supplying for the period five to ten years ahead might take on different values than would apply to the medium term that is relevant for monetary policy.

In your comments in the upcoming economic go-round, you may wish to express your views on whether you support publication of longer-run projections and, if so, which of the approaches you prefer. You might also wish to comment on the desirability of conducting a trial run with long-term projections—say, in October—before going live with long-term projections, perhaps in January. That concludes our prepared remarks.

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

MR. FISHER. If I may, I would like to ask Nathan, Mr. Chairman, about exhibit 4 and exhibit 5. Particularly noteworthy is that exhibit 4 is the forecast period showing a significant decline in inflation in the emerging market economies. I am wondering what that is based on. Do we have a sense of capacity utilization or slack, if it is all reliable, or is it based on a sense of commodity prices? What is that noticeable down-swoop?

MR. SHEETS. You are asking particularly with respect to the emerging market economies?

MR. FISHER. Yes, sir. In the top left-hand panel.

MR. SHEETS. In the process of preparing our forecast, we do come up with estimates of slack for the emerging market economies, but we are not inclined to put a whole lot of weight on them. The concept of an output gap is not really a well-defined construct for, say, China. Nevertheless, these economies will be growing a little more slowly than they have in the past, and some of the pressures on resources associated with that growth may abate a bit. I think that is at least a piece of the story of what you see here as the decline. But at the end of the day, it has to be a story about commodity prices. Food prices and energy prices have pushed this up. Depending on exactly which emerging market economy you're in, food prices will range anywhere from 25 percent to 33 percent of their basket. As long as those food prices and energy prices are moving up dramatically, you are going to see rapid increases in inflation. So the decline that you are seeing in this chart really is conditioned first and foremost on commodity prices flattening out. I wish I had a better story.

MR. FISHER. You don't know how happy I am to see global things come first. But are you saying that a great deal of uncertainty is attached to that forecast?

MR. SHEETS. Oh, absolutely.

MR. FISHER. Then, in exhibit 5 on core import prices, I guess it is pretty much the same answer. One would expect that these would fall of their own weight after a while.

MR. SHEETS. Yes. The spike that we have seen is driven particularly by commodity prices. The depreciation of the dollar has played a secondary role, so the decline in core import price inflation to below 2 percent next year is conditioned crucially on commodity prices flattening out and the dollar not depreciating as rapidly as it has over the past few years.

MR. FISHER. Mr. Chairman, if I could ask just one other question—of Larry, I think it was—on the housing exhibits. I am wondering if we are not in the eye of the storm here. We have had the first wave of buckling at the knees—or worse, cascading. If you talk to the homebuilders, they are, of course, the most depressed group imaginable. But they are waiting for another shoe to drop, which is the foreclosures on alt-As. I'm wondering what our opinion is on that. Things have calmed down a bit, but we still have another phase of the storm coming through, which is what I just described. What are our assumptions about that?

MR. SLIFMAN. We expect foreclosures to rise—and to rise appreciably. One thing we have done in thinking about house prices is, in effect, to build in some extra house-price depreciation, above and beyond what our price–rent model would want to say, to reflect the kinds of factors that you are talking about—the foreclosures, what that means then for the vacancy rate, and what that does to house prices, particularly in certain parts of the country. I see President Yellen nodding her head because California, for sure, is one place where that could clearly be an important factor.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. President Evans.

MR. EVANS. Thank you, Mr. Chairman. I'd like to ask a question about inflation and labor compensation. At the last meeting, many of us, myself included, mentioned that labor compensation had not been growing very strongly, and we took that as a possible comforting comment about inflationary pressures not being too strong. That comment was in this presentation and yesterday's, too. Now, statistically, isn't it the case that labor compensation is not really a good predictor of inflation? It really tends to lag more. So how should we think about interpreting that lack of acceleration for inflation expectations and pressures? Feel free to dispute that.

MR. WASCHER. No, I agree with you. I think our models have been surprised by the low rates of compensation growth. One way to think about it is that in the past we might have seen higher headline inflation passed through more quickly to compensation growth—as in the ’70s, when those wage–price spirals were really led by prices, but then wages contributed by following. So far we haven’t seen any sign that higher headline inflation has been putting upward pressure on compensation costs. I think there’s a risk. We obviously included the simulation because we think there’s a risk that could happen in the future, but to date we have not seen evidence that that’s been the case. There are a number of reasons to think that things now might be different than they used to be. For example, just a structural reason, unions are less powerful than they used to be; a much smaller share of the work force is unionized. In the 1970s there were all sorts of automatic cost-of-living adjustment clauses. Even when there weren’t, there were big catch-ups for past inflation. Another structural reason might be that the minimum wage was higher in the 1970s, and it is lower in real terms now. I think more generally this fits in with the general notion that inflation expectations are less responsive to immediate shocks in headline inflation than perhaps they used to be.

MR. STOCKTON. From a forecasting perspective, President Evans, I think you’re right. I don’t think models that rely simply on labor costs to predict prices are very sound in terms of their forecasting ability versus just a plain old price–price type of Phillips curve or a price type of Phillips curve augmented with price expectations. Part of the reason may be that the compensation data themselves are just so poor that, in fact, it’s really a measurement problem. It’s not that you would argue that labor costs, which are a very significant chunk of overall business costs, don’t matter. I do think you can probably take, and we certainly have taken, some limited comfort from the fact that we have not yet seen an acceleration of labor costs. That likely indicates that you are not seriously behind the curve already or that something is baked in the cake. I don’t think you can necessarily take comfort from the well-behaved compensation thus far that you are not going to confront some inflation problems going forward. It's more that the compensation data don't suggest that you've fallen seriously behind the curve. In some sense we see the higher inflation expectations readings themselves, or at least some of the mixed-to-slightly-higher inflation expectations data, as suggesting that you're facing a bit more of an inflationary difficulty over the next two years than we thought two months ago would be the case.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. Just a quick follow-up, Mr. Chairman. To what extent do you impute the kind of insecurity that comes from competition and broader outsourcing? If you impute anything there in terms of wage behavior here, to what extent are you assuming going forward that the increase in wages being paid elsewhere might bleed into our wage behavior here?

MR. WASCHER. Well, we don't account for that in our compensation model. That said, as I mentioned, the models have been surprised about how low compensation has been. That would be one possible explanation for that residual. If that factor were to diminish, it would imply that that residual would diminish, but we haven't built such an effect into our forecast.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. Other questions? President Bullard.

MR. BULLARD. I want to ask a question about exhibit 7, which talks about factors affecting the GDP forecast. The second bullet point mentions judgmental adjustments, which were tempered this time relative to last time. Last time I described this as a regime-switching model, and you said that was perhaps too much. The economy sort of switches into this recession-like behavior, and we know that the economy might behave differently in that environment. But do we now think the probability of switching into that behavior is smaller? What is the forecast? Is the forecast some kind of average between this high state and this low state? That's what you said here—it has tempered our judgmental adjustments. It sounds as though there is less probability of switching into that state.

MR. SLIFMAN. It's hard for me to think of it in these probabilistic terms. I would say that we still think that the economy is going to have these negative effects that are associated with periods of low growth. Now, whether that is precisely a recession or simply just a low-growth period, it's hard for me to distinguish.

MR. BULLARD. But the rationale is that you switch into the recession and you get the correlations from—

MR. SLIFMAN. Yes. The way to think about it is that we switched into a low-growth period. Whether it is precisely a recession or just simply a low-growth period shouldn't be the demarcation point. We still think that the economy is operating in a low-growth period. There is probably not as much severity to that low-growth period, but we still think that is where it's operating.

MR. BULLARD. But then you're switching into the low-growth period, and then we take the correlations for low-growth periods, which I guess are maybe not as severe as in recession periods.

MR. SLIFMAN. Just as a factoid to throw out here, one of my colleagues on the Board staff, Jeremy Nalewaik, has estimated some of these models looking at switching between high-growth periods and low-growth periods, where a low-growth period does not necessarily have to be a recession. Using the GDP data through the first quarter plus our forecast for second-quarter GDP, which is now at an annual rate of 1.7 percent, his model still would suggest that there's an 84 percent probability that the economy is operating in a low-growth state. So I think that it was a fair thing for us to continue to have the judgmental adjustments, which by the way aren't just recession-like effects. They also include financial turmoil effects and some uncertainty things. I think it's a fair thing for us to have included those, but as I say, we've tempered them.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. I want to make sure I understand what you just said. Your response suggests that there's a third state that's even worse than we are in now, that one could possibly go into, and that what you've tempered is the probability that we're in that worst state?

MR. STOCKTON. Again, we want to step back a bit from taking this regime-switching too seriously as implying that there are just two states of the world or maybe three states of the world. There are lots of different states of the world. What we are trying to do is look at the residuals in our spending equations and ask how they behave in various kinds of periods. In periods with substantial increases in the unemployment rate, weak payroll employment, and big declines in consumer sentiment, there also are substantial negative residuals in our spending equations, particularly on the consumer spending side. That is still built into this forecast. So we have not interpreted the last six weeks of data as suggesting that recession concerns are all behind us, that we were just completely wrong, and that we are now on a much stronger growth path than we previously thought. If, in fact, you're worried that the incoming data might be signaling a stronger growth path, then I would take a look at the "upside risk" scenario that we show in the Greenbook. There we take out all of our spending residuals—those that are incorporated because we thought we might be in this low-growth or recessionary-like state and the ones that are associated with financial turmoil—and you get growth in that case that is a little above potential growth and a path for the fed funds rate that is even steeper than the current market expectations.

Now, although we kept these negative residuals in our forecast, we did have to acknowledge the fact that underlying aggregate demand appeared stronger than we thought it was going to be at the time of the last FOMC meeting. There is an underlying strengthening of aggregate demand in this forecast that shows up as an increase in the equilibrium funds rate of roughly ½ percentage point. So we're trying to acknowledge the strength of the incoming data, but we want to be clear that this forecast still embeds some significant negative add-factors on spending going forward. That could be wrong. Maybe the incoming data are signaling that we are just fundamentally wrong about that aspect of the forecast. As Larry showed, given the stunning decline in consumer sentiment, the continued weak business sentiment, and the fact that the unemployment rate has risen as much as it has and has done this in the past only in periods of recession, we felt comfortable still presenting you with a forecast that anticipates that aggregate demand is going to be very weak over the next several quarters.

MR. LACKER. I don't want to belabor this too much. I was curious about what you tempered. I think President Bullard was looking for whether you tempered the probability on state 2. I'm with you in not wanting to place a lot of probability on *n* states, but it sounds as though the growth trajectory—you know, the magnitude of the add-factors you were thinking of—has been drawn back a little. Is that a fair characterization?

MR. STOCKTON. That's correct—and the timing. So there are two aspects. One is that we have interpreted some of the surprise as a persistent strengthening in aggregate demand that we had not anticipated. The other is that the economy is not as weak now, and therefore the bounceback in activity next year won't be as strong. As Larry said, there are a lot of moving parts, but both of those considerations are built into this forecast.

MR. LACKER. Thank you.

CHAIRMAN BERNANKE. Thank you. Any other questions? Okay. We are about ready for our go-round. Let me remind you about the proposal to add a long-term line to our projections. The rationale for doing so is that the current system doesn't necessarily let the public know what our views on the steady state of the economy are. To show my own hand, I think it would be helpful to add maybe one line that said in five to seven years out what we think the economy would do. But I think it is important for those of us who want to express an opinion to do so. If there is interest, as Brian mentioned, we can do a trial run in October, and we won't have to make a final decision about whether to go forward until October or December or perhaps later depending on how things go. But if you have a view on that, please add that to your commentary. So let's begin with the economic go-round, and we'll start with President Hoenig.

MR. HOENIG. Mr. Chairman, I will begin my remarks this afternoon with a brief update on the conditions in our District. Overall, District economic activity continues to expand moderately, with strengthened energy, agriculture, and export manufacturing more than offsetting the softness in our housing, retail sales, and other types of manufacturing activity. District labor markets continue to perform reasonably well. While job growth has slowed over the past few months, unemployment remains very low, and many sectors continue to have difficulty finding workers, especially skilled ones. Evidence on wage pressures is mixed. Although wage pressures have moderated somewhat in our Beige Book survey, some recent labor union contracts have built in rising profiles for hourly wage increases over the term of the contract. Rising energy and commodity input prices are continuing to negatively affect our District economic activity.

Reports from businesses suggest that higher energy and food prices are being quickly passed on to the customer now. However, businesses are having mixed success in passing on other cost increases, resulting in some severe erosion in margins and profitability in some of the firms. To illustrate some of the cost–price dynamics, I would like to take just a minute and relate the recent experience of one of our Branch directors, who operates a multi-line manufacturing firm. I mention this because I am hearing it more and more. In addition to rising fuel prices, his business has seen a doubling in steel costs since January, with July quotes on steel tubing up an additional 25 percent. In response, his company recently announced a price increase of 16 to 18 percent across a range of products. Competitors immediately matched or exceeded his price increases. Notably, he made these price increases despite a decline in new orders in May. He also noted that import prices from China that he has seen have risen 28 percent this year and that ocean freight prices have risen about 20 percent. As a result, customers who previously bought Chinese products are now purchasing U.S.-manufactured goods. It is interesting—I talked with some of the folks at Union Pacific, and their shipments into the Midwest have dropped slightly, but their shipments out have increased about 3 to 4 percent. So that is what is going on in the region.

More broadly, turning to the national economy, I have revised up my growth estimate for the first half of 2008, but it has made little change in my longer-run outlook. Compared with the Greenbook, I see somewhat stronger growth in the second half of this year and somewhat weaker growth next year and in 2010. Most of the difference from the Greenbook in 2009 and 2010 comes from the policy path assumptions. I assume that policy accommodation is removed at a more rapid pace than does the Greenbook. Recent economic data suggest that, although downside risks to growth remain, they have diminished. I continue to judge that the potential spillover effects from the financial distress have understandably been overestimated in this Committee's recent decisions and in Greenbook forecasts in recent months. In my view, the greater risks to the outlook come from rising energy and commodity prices and less from the financial distress as we go forward. In my view, current policy accommodation is greater than needed to address these risks.

As I indicated at the last meeting, I believe that the upside risks to inflation have increased considerably over the past several months. Like the Greenbook, I expect both overall and core PCE inflation to move higher in the second half of this year. If this happens and we maintain the current level of the funds rate, I believe we are likely to see further erosion in inflation expectations, which will undermine our credibility with financial markets and the public. In this event, I judge we will greatly increase the likelihood that we will need to raise rates more aggressively, taking rates above neutral, in order to achieve our longer-run inflation objectives; and that is of significant concern to me, Mr. Chairman.

Turning to the issue of long-term projections, let me comment that I have felt somewhat constrained by the current three-year horizon for our quarterly projections. Of the options presented by the subcommittee, I am most comfortable with providing estimates of the values for total inflation, output growth, and unemployment at which the economy is likely to converge. I am not sure, however, how we want to label these estimates, if they are included in the table. I understand that putting these estimates out might be interpreted as a move closer to inflation targeting, but I think that this is a bridge we are ready to cross since we adopted the enhanced projections process. The other options seem less desirable. Given the resources required, by my staff at least, I doubt that we could provide a meaningful forecast at a four-year or five-year horizon, and I am not sure how projections for average values over a period of five to ten years ahead would be interpreted by the public. In my view, appropriate policy should be expected to return the economy to its long-run equilibrium over a three-to-five-year period, with the length of the period depending on the nature of the shock. Setting out a five-to-ten-year horizon could be construed as a weakening in our commitment to achieve our mandate in a timely manner. Thank you.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. The intermeeting period has been full of surprises. Real-side data came in considerably stronger than I anticipated, so like the Greenbook I have adjusted up my forecast for growth in the current quarter. At the same time, the adverse fundamentals that will weigh on household and business spending going forward have grown somewhat heavier overall, and that has prompted me to revise down my growth forecast for the second half. On the inflation front, readings on core inflation surprised to the downside. Nonetheless, given that the prices of many commodities have continued to rise more rapidly than I anticipated and that some measures of inflation expectations have turned up, I have adjusted up my inflation forecast for 2008, considerably up for headline inflation and modestly up for core inflation.

The strong incoming data on spending eased my fears that we are in or are approaching a recession regime of the sort embedded in the last two Greenbooks. However, given the numerous large and worsening drags on spending, a couple of months of data aren’t enough to convince me that we are on a solid trajectory. Moreover, the spending data may well fail to reflect the real underlying strength of consumer demand because of the effects of the tax rebates. Spending patterns could easily be distorted by small differences between what we projected that households would spend each month out of rebate checks and what they actually spent. In monthly spending data, a swing of just a few billion dollars looks enormous. Perhaps households who were already paying through the nose for food and gas and are increasingly credit constrained have put their rebate checks to work a bit early this time. After all, households knew in advance that the checks were going out. For example, Google searches related to tax rebates peaked in April. We actually kept track of the data on that. So I will be closely watching the data over the next few months, hoping to get a cleaner read on the underlying state of consumer demand.

As I said, the adverse fundamentals are still with us and in some part are worsening. Evidence that the credit crunch is ongoing is all too clear. Bank asset quality continues to deteriorate. Banks continue to deleverage, and they are tightening lending standards as they do so. The market for private-label securitized mortgages of even the highest quality remains moribund. Spreads on agency-backed mortgage-backed securities have risen during the intermeeting period, which are likely to spill over to the primary mortgage market with a lag. Anecdotal reports suggest that the constraints on household borrowing continue to tighten. For example, two of my most senior bank supervisors—both with FICO scores in the stratosphere—have had their home equity lines slashed. One has deferred a planned home renovation project as a consequence. If that is happening to them, I can only imagine how hard it must be to get a loan if you have a merely average credit rating.

Housing prices have also fallen at a somewhat faster rate than the Greenbook previously anticipated. Given the overhang of homes for sale, the recent rise in mortgage rates, and the fact that the homeownership rate is likely to continue trending lower, I think the downward pressure on home prices and construction will persist, as the Greenbook suggests. The Greenbook is actually at the conservative end in its estimates of the wealth effect. It assumes a marginal propensity to consume out of housing wealth of about 3½ cents on the dollar. In contrast, a number of recent estimates in the literature are in the 6 cent to 9 cent range. There is a clear risk, then, that the combination of declining housing wealth and tightening credit could lead households to restrict spending more, and more persistently, than anticipated.

But the big adverse shock since the last meeting is oil prices, which are up $25 a barrel from the already elevated April levels. Empirically, since the mid-1980s, the estimated responses to relatively exogenous increases in the relative price of oil have tended to look qualitatively like the simulations in the Bluebook and the Board staff's special memo on oil prices, in which we are credible in our commitment to long-term price stability. Most notably, the empirical estimates suggest at most a modest effect on core inflation. Nominal wages barely respond; by some estimates they even fall slightly.

The model results suggest that the outcomes we have seen in the actual data are crucially dependent on our having credibility. With substantial target drift, workers demand higher wages, which firms pay and then pass on. Fortunately, the anecdotes I hear are more consistent with credibility than with an upward wage–price spiral. In particular, my contacts uniformly report that they see no signs of wage pressure. There also is no evidence of real wage rigidity in response to energy prices. When energy prices have risen, real wages—in product as well as consumption terms—have generally fallen. In other words, real wages have been depressed in the 2000s, at least in part reflecting rising energy prices. But there is no sign that workers have over a number of years tried to recoup these losses at the bargaining table. Given the importance of credibility, the substantial increase in expected inflation in the Michigan survey is concerning but not yet alarming. I discount these readings somewhat because of analysis by my staff that suggests that, at either the one-year or the five-to-ten-year horizon, consumers have always tended to react strongly to contemporaneous inflation data.

Changes in credibility are fundamentally about changes in the process by which people form expectations. But as far as consumer expectations are concerned, that process appears remarkably stable. For example, if you use data through the early 2000s to estimate equations that link inflation expectations to contemporaneous inflation, you will find that those relationships fit remarkably well out of sample. They don't show the systematic underprediction of inflation expectations one might expect if the Fed had suffered a significant loss of credibility at this point. The dependence of consumer inflation expectations on recent data also leads me to believe that they will fall if, in fact, headline inflation comes down as we are predicting as commodity prices level off.

Furthermore, I don't think that households' elevated expectations will make it harder to achieve our projections. Earlier research suggested that surveys did, in fact, provide useful information about future inflation. But during the past 15 or 20 years, the actual inflation process has become much less persistent even though households appear to assume otherwise. There is, thus, a notable divergence between the actual inflation process and the one that is embodied in consumers' inflation forecasts. As a result, inflation forecasts incorporating consumer expectations have been a lot less than stellar over this recent period. So it does not appear unreasonable to believe that the effects of recent commodity price shocks will wear off faster than consumers are expecting. An unresolved question is, Whose expectations matter for the dynamics of inflation? I take some solace from the fact that 10-year inflation expectations in the Survey of Professional Forecasters have been relatively stable since the late 1990s and from the fact that five-to-ten-year breakeven rates on TIPS are below their peaks from earlier in the year.

Taken all together, I think inflation expectations remain reasonably well anchored. The oil price increases have led me to raise my projections for overall PCE inflation sharply. Cost pressures are likely to push core inflation up a bit, though I see less pass-through than the Greenbook does. Higher oil prices and interest rates and lower housing prices have led me to modestly reduce my forecast of growth in the second half of this year and next year. My forecast is predicated on fed funds rate increases that begin in December of this year, gradually bringing the funds rate to 4¼ percent in 2010.

Briefly, on the issue of long-term economic projections, I welcome greater transparency about our long-term objectives. I think that would be beneficial, and there is a good reason, as you have articulated, to try to do that now, given that for many of us—certainly for me—2010 is not long enough for me to project that the economy will have converged to a steady state. My preference is to provide projections of the average values for output growth, unemployment, and total inflation that are expected, say, five to ten years out. I think that these values can communicate the necessary steady-state information without burdening us with forecasting every year of the transition to the steady state. Also, I would favor conducting a trial in October.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, you are going to get a contrapuntal tune here. That is the beauty of this table and the different perspectives around it. I am going to take a different approach today than I have in the past. I am going to talk a bit about the Eleventh District first, which I don’t often do. The reason for that is, because of its nature and size, because of its being the leading exporting state in the country now, and because of its job creation, it is in a slightly different position—or significantly different position, depending on which District it is compared with—from the rest of the country.

Our job growth through March is running about 3.8 percent. Unemployment in April was 4.1 percent, despite a sizable influx of immigrants, which we see from new license plate registrations from California and particularly from Florida as well as from people still coming across the border. Sales of existing homes rose in May, while inventories and prices held steady. Apartment demand is robust, and rents in the major cities, such as Dallas and Houston, are rising. The real export growth of Texas was 7.2 percent in April after 3.9 percent in the first quarter. That is telling you that our chemicals are now being priced aggressively but also that everything else is being priced aggressively worldwide. That's a significant export sector for us. Importantly, on the price front, the Dallas Fed's own Texas manufacturing outlook survey and the regional CPI data indicate continuing price increases and substantial evidence of pass-through to higher final goods prices. Thirty-nine percent of the respondents report the ability to realize higher prices of finished goods currently; another 45 percent expect to be able to realize higher prices in the next six months. Despite these strong numbers, our soundings and our instinct project a slowdown in the future. We have been projecting a slowdown—we haven't seen it. Discretionary income has been bolstered by employment, but squeezed by rising food and energy prices and credit constriction. So we are looking for the District to slow and yet to continue to outperform relatively speaking.

I would like to devote the rest of my comments to the U.S. economy and to the global economy, particularly to the contrapuntal insights I have gained from my soundings. First, on the global economy, Nathan, our own research at our little globalization institute in Dallas indicates that the projections of real economic growth of most of the advanced countries are being revised downward whereas expected inflation is being revised upward. For the major emerging market economies, growth realization, at least as it appears in their forecasts, for the most part holds up, but inflation expectations are being steadily revised upward. In other words, the two types of economies share on the inflation front, whereas there is disparity and a little cacophony as far as growth is concerned. We are working on it, but we have yet to develop a reliable measure of global slack. JPMorgan, with whom we have been working, has a slack index that purports to be global. But as you pointed out, Nathan, it excludes China. Minor oversight. It also excludes India.

One would think that the growing slack in the advanced countries would be mitigating price pressures. Yet those countries with numerical price objectives or inflation targets—from Mexico to Turkey to New Zealand to the European Central Bank to the Brits—are now contending with inflation in excess of their target or comfort range.

I was thinking the other day of Mervyn King's comment that, once they had to write to the Chancellor of the Exchequer, it would lead to a lot of letter-writing. It took 15 years for the first letter to be written after inflation targeting was embraced. Of course, two years ago this was resurrected, and now they seem to be doing so with a great deal more frequency. Now there is a risk of acquiring writer's cramp. I would say that, if we were under the same strictures as the Bank of England, we might be subject to the same concerns. In our last meeting, I posited that something persistent and pernicious was occurring on the inflation front. Mr. Chairman, the one thing that is even clearer now—particularly after my soundings, which I'll report in just a second—than it was in May is that inflationary pressures, inflation expectations, and anticipatory behavioral responses among consumers and businesses have intensified, whereas our confidence about economic growth has improved.

I don't believe that we are out of the woods yet on the risk of a credit-induced slowdown, though I believe our liquidity initiatives are a proper and good palliative, as you know. But if

Robert Frost will forgive me, the woods are not lovely, and they are indeed deep and dark on the price front. Although the tail risk of economic recession has diminished, I think it still exists; certainly the anemia—just to use another word that you referred to—does. But the risk of inflation, in my view, has assumed greater depth and breadth since we last met. Stated differently, I don't believe that inflation expectations are presently well anchored, here or elsewhere. I believe they are being—just to kill the sea analogy, Don—torn from their moorings and are at risk of going adrift.

Now, I took a different approach this time with the 30-odd interlocutors with whom I discussed the outlook. I simply asked them one question: What is different in this cycle from what you have seen before? Most of these people have been in business for 30 years plus. Here are some sample testimonials as to what they are seeing. The CEO of Fluor, which has a $38 billion backlog currently, said, "When I started here in 1974, we put inflation contingencies into every contract. In the 1990s, that had not only gone away, but we were confident we could negotiate cost down to below what we were bidding. Now it is just the opposite." The CFO of Frito-Lay, which just pushed through a 9 percent price increase (which, parenthetically, Wal-Mart accommodated at 7 percent), said, "Most of our executives are in their late 30s or early-to-mid 40s. They have never seen these kinds of numbers. This is reminiscent of the aftershock to Nixon's wage and price controls, and we are currently having to hold seminars to teach management how to manage inflation." From the CEO of Wal-Mart USA: "We see increased"—and this is his word—"pervasive price pressures. I am telling you that we have an economy where the real people are being trampled by inflation, and for the first time in memory, we are getting noise from employees about the cost of living." Wal-Mart raised the pay of 60 percent of their associates between single and double digits in the last quarter, and my contact said, “We are now contemplating a series of measures such as providing discounts to employees to counter considerable employee angst about the cost of living.” From the CEO of Kimberly-Clarke, who just notified the retailers of a 7 percent price increase to come in August after the 7 percent they pushed through in February, in addition to which they are going to add a shipping surcharge: “Customers are no longer asking if, but when, we will increase prices, so they can move in anticipation.”

I can give you other testimonials, Mr. Chairman. One of my favorites, by the way, has to do with a very small operation, a three-store dry cleaning operation, Faulkner’s Fine Dry Cleaning in Dallas. They approached me the other day to say that they would have to increase the price of cleaning our shirts because the price of 18-inch white hangers, which are steel-based, has increased 65 percent. They showed me the circular that had been sent around by the fabric cleaning supply company that is the last remaining manufacturer of hangers in the United States. All of that manufacturing has gone to China. The circular that they are sending their customers, the cleaners, says “What should cleaners do? Raise your prices. You’re worth it.” Then—and this strikes at the heart of every son of every Australian—Budweiser, which raised its prices 3½ percent in February, according to our local distributor, plans to raise 3½ percent again in September. And the Bud distributor in North Texas, who has had that distributorship for 43 years, said that never before in his lifetime had he seen two price increases in one year. Finally, the CEO of JCPenney’s just returned from an around-the-world buying trip. After 11 years of apparel price deflation, Chinese manufacturers are seeking 8 to 9 percent price increases in ’09, 11 to 12 percent for footwear, and for small kitchen appliances in the mid-20s. The CFO of the company told me that they are running at minimum staffing levels. If anybody begins to break the wage barrier, then, “Katie, bar the door!”

So, Mr. Chairman, I would say that currently our patient—the economy—is indeed a sick puppy. Some of its vital organs—geographic regions such as the one I am fortunate to live in, or a strong export sector of the United States, or entrepreneurs and business leaders who have learned to wring unanticipated efficiency and profits out of globalization or from within cyberspace—are very strong. Yet others—states like California and Florida, the housing sector, and overall consumer confidence—are bleeding, if not hemorrhaging. This is not to mention the still precarious state, despite the very good report that Bill gave, of our financial system as it recovers, I hope with our help, from years of its recklessness and excess. I think we have, like loyal practitioners and with the equivalent of the Hippocratic oath, done the job that we are expected to do in terms of resuscitating the victim.

That is the good news. The real bad news is that our patient appears to be acquiring a staph infection in this hospital that we have created, and that staph infection is inflation. I believe inflation is upon us. I believe expectations are discounting more inflation. Very importantly—and this is tough to get from the models—I believe that behavioral changes are beginning to manifest themselves. Now, some would argue that this infection is temporary and may well go away. Others will argue that it will be stayed by strong rhetoric. Still others say that it will require—I don’t know if it’s an antibiotic or an antidote—further tightening, lest the infection spread and counteract the good that we have done with our liquidity facilities and by previous policy decisions. That seems to me to be the problem that we will have to deal with at this meeting, and I look forward to hearing my other colleagues’ opinions. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I would like to start with some anecdotal feedback from the region. As you know, we have a lot of Branches, so we have a lot of directors, and we ask our directors a lot of questions. The anecdotal feedback from our 44 directors about the second half can be characterized as subdued. Almost all reported that they expect economic activity to be flat or slower, and I took special note that these expectations deteriorated in June after having actually improved a bit in May.

The residential housing situation in the District resembles the national picture. Both sales and new construction are weak. High levels of inventories are being exacerbated by foreclosures, which are adding to downward pressure on prices. However, there are tentative signs of a bottom forming. Our survey of Realtors across the District indicates that the pace of decline of single-family home sales may be abating. Industry contacts tell us that foot traffic and buyer interest are picking up, particularly in Florida, although I would say that what constitutes progress in Florida would not be considered very encouraging elsewhere. Nevertheless, our view is that the beginning of an adjustment process is under way, but the end of the process looks to be a long way off. Some further home-price deterioration is likely to accompany this bottoming process.

Credit conditions in the District continue to tighten because of perceived risk and also liquidity pressure on our banks. Our banks indicate that the process of deleveraging continues, which is affecting lending for residential real estate and, to some extent, commercial real estate. We are also hearing from several sources that funding of community banks is becoming an increasing problem because of their previous dependence on wholesale and correspondent bank sources. Higher energy prices are, not surprisingly, affecting our outlook. Hospitality industry contacts, for instance, expressed concern about low summer bookings. Although most tourist destinations have reported solid activity to date, few expect this to continue.

The reacceleration of energy and commodity price inflation has businesses focused on cost pressures. Several business contacts indicated that price increases had been relatively easy to pass through and make stick in this environment. I wouldn’t say that it’s widespread yet, but I do hear some reports that businesses are expecting wage increases to eventually reflect the recent increases in the cost of living. This could be a significant factor, particularly in service price inflation. This and other anecdotal input has colored my outlook for the national economy for the balance of the year and into 2009. I have revised up my forecast for headline inflation in 2008 and 2009 by 50 and 25 basis points, respectively. I am also assuming that the recent inflationary pressures from elevated energy and food prices will unwind more slowly than I previously projected—a view reinforced by expectations expressed by my District contacts. Like everyone else, I am deeply concerned that inflation expectations seem to be rising and that expectations of general price inflation, reflecting second-, third-, and fourth-order effects of recent oil and commodity price rises, risk becoming institutionalized. I am prepared in the near term to think tactically regarding the conflict between growth and employment policy objectives and inflation objectives; but sustained inflationary pressures that extend well into the fourth quarter and rising expectation readings may force, at least on my part, a more strategic look at the tradeoff.

I would like to talk for a moment about financial markets. I made a number of calls during the intermeeting period, and the growth-versus-inflation tactical dilemma is complicated further by a very mixed picture in financial markets. My contacts all acknowledge improved conditions since mid-March, but discussion of the current market circumstances and the outlook had a sort of half-full/half-empty quality. My contacts, taken together, pointed to several positives, including the health of the corporate loan market, improved CDO pricing, the readiness of forming distressed funds to buy asset-backed securities, alt-A mortgage demand, the growing perception that subprime loss estimates have been overstated, and some comment on Goldman's Cheyne deal, which they believe will help create price determination for certain securities. At the same time, these contacts cited areas of continuing or worsening weakness, including: HELOCs and second mortgages; option ARMs and alt-A hybrids; indirect auto, given the collateral value of SUVs in current circumstances; in contrast to CDO pricing, CDO squared pricing is very weak and deteriorating; the obvious concern about the growing liquidity issues of regional banks; and the view that the auction rate securities market valuations, given illiquidity, are suggesting that this market has little probability of returning to normalcy. Overall, my contacts in financial markets were encouraged but expressed worries over still-substantial downside potential.

Let me turn now to my national forecast compared with the Greenbook forecast. The Atlanta projections for the national economy are broadly similar to those of the Greenbook. We have the same general narrative of slow growth for the balance of the year followed by a gradual pickup through 2009 and 2010. My projections for headline and core inflation are virtually identical to the baseline Greenbook projections. However, I believe that there may be less disinflationary pressure than seems implicit in the Board staff's forecast. As a consequence, the fed funds rate path that supports my inflation outlook is well above the Greenbook's at the end of 2009 and 2010. We are 75 basis points higher at year-end 2009 and 100 basis points higher at year-end 2010. Notwithstanding the upward revision of the first-quarter GDP number and the better expectations for this quarter, I still believe the near-term risks to growth are weighted to the downside. At the same time, as suggested by my revised forecast, I see the risks to our inflation objective as weighted to the upside.

On the subject of the long-term projections, I favor the third approach, which is three years plus long-term averages, and certainly would be comfortable with approach number 2. I'm generally dubious about the ability to do actual forecasting for the outyears, even as near-term as the third year. So I really don't favor approach number 1. My experience, in the brief time I have been with the Fed, has at least personally been, shall I say, challenging from the point of view of forecasting. I tend to think of the long-term projections as being roughly equivalent to our targets or policy goals. In fact, the approach we have generally taken with our three-year forecasts is making the outyear approaching at least what we would consider to be the trend rate for growth and the employment and inflation objective. So I think long-term projections really do amount to more-explicit targeting, and very likely the first question we get when we come out of the blocks—if we have this kind of approach—will be, Is this your target? I am comfortable saying "yes" to that question and, therefore, would support the third approach. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. Despite some encouraging data recently, the Boston Fed economic outlook continues to see the economy growing below potential over the next several quarters, further weakening in labor markets, and core PCE trending down in response to excess capacity. Overall, our forecast has not changed significantly since our April meeting. I view recent strength in consumer spending indicators as largely borrowing from the second half of this year. This view is supported by the assessment that, apart from the fiscal stimulus, consumption fundamentals—income, wealth, and employment—remain on the weak side.

Taking on board some of the increase in the May unemployment rate, our forecast has the unemployment rate peaking at a slightly higher rate than at the last meeting. In this respect, we are similar to many other forecasters. The May Blue Chip forecast had unemployment peaking at 5.6 percent. The June Blue Chip forecast for unemployment peaks at 5.7 percent. While the Greenbook has the unemployment rate peaking at 5.7 percent, as it did in April, it has the unemployment rate at 5.6 percent at the end of 2009—0.1 percent higher than the April Greenbook. So at least as measured by the unemployment rate, there seems little improvement in the outlook since the April meeting. As in the Greenbook, residential investment in our forecast continues to be a drag on the economy in 2009, and consumption holds up primarily as a result of the fiscal stimulus package, which is in part offsetting the negative impact of significantly higher oil prices on consumption. A major uncertainty remains whether further home-price declines will have a more negative effect on residential investment and consumption than we currently have in our forecast.

Similarly, I would view financial market conditions as not having changed significantly since our April meeting. The three-month LIBOR–OIS spread remains quite high by historical standards at roughly 70 basis points, where it has been trading since the April FOMC. The Dow Jones, S&P 500, and Nasdaq indexes have all declined since our April meeting. Investment banks, such as Merrill Lynch and Lehman Brothers, are now trading substantially below where they were trading at our April meeting and below where they traded during the middle of March when Bear Stearns experienced difficulties. Stock prices for large regional banks have declined as they have needed to increase loan-loss reserves, raise new capital, and reduce dividend payments. I continue to be concerned that we have more, significant difficulties ahead for many financial institutions. First and second mortgages and home equity lines of credit are deteriorating at many banks as falling home prices and job losses create problems that have now spread to some prime residential products. I would characterize financial markets as remaining fragile. The past two TAF auctions still produced stop-out rates above the primary credit rate, and financial markets remain susceptible to event risk. The recent flurry of articles on Lehman before their announcement of their capital infusion highlights continued concerns about investment banks, despite our new liquidity facilities. As a result, I continue to view the downside risk of further financial shocks as being significant.

Core PCE inflation has trended lower during this quarter, bringing the four-quarter change for the past year to 2.1 percent. Given that the Boston Fed forecast expects significant excess capacity over this year, we forecast that core PCE inflation will be slightly below 2 percent in 2009. If food and energy prices stabilize, we expect total PCE to converge to core PCE. We have experienced significant food and energy shocks, and oil prices continue to be higher than our expectations. I would be quite concerned should the serially correlated surprises in food and energy become embedded in inflation expectations and wages and salaries. But a critical element to my forecast is that total PCE inflation converges to core PCE as wage and salary increases remain largely unaffected by the supply shocks. In the data to date, wage and salary increases have not trended up in response to the supply shocks, and my expectation is that excess capacity in labor markets and continued competition from abroad make it unlikely that the relative change in food and energy prices will become embedded in labor contracts.

For the intermediate term, I remain focused on core PCE rather than total PCE for several reasons. First, monetary policy is unlikely to have much effect on food and energy prices, which are responding, among other developments, to the impact of natural disasters such as flooding in the Midwest and manmade disasters such as ongoing political difficulties in Nigeria and the Middle East. Second, statistical evidence provided by our research department seems to indicate that over the past 20 years, when total and core inflation diverge, total has tended to converge to core and not the opposite. Third, while inflation expectations are difficult to model, the lack of an upward trend in wages and salaries seems consistent with worker expectations being driven by core rather than total inflation. While the supply shocks may have increased the upside inflation risks, the downside risks to the economy and financial markets remain quite elevated. In my view, we need more time and data to determine with greater confidence which of these risks poses the greatest danger to the economy.

In terms of the options, I am comfortable with either 1 or 3. I have a slight preference for option 1. It is not that difficult for us to extend our forecast out five years. I actually think it would be easier to explain to the public than option 3, and I think explaining to the public is one of the main goals of expanding the forecast. But I could be happy with either option.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. In the Third District, as anticipated, manufacturing activity, residential construction, and employment have remained weak. Nonresidential construction has now softened, although vacancy rates in Philadelphia and around the District remain relatively low. Retail sales remain sluggish. Bank lending has been restrained. The outlook among our business contacts, however, varies significantly by sector. Manufacturers expect a rebound in activity over the coming six months, and residential real estate contacts report that they believe market conditions may be near bottom, although they expect any recovery to be slow. Interestingly enough, it is the same sort of anecdotal evidence that President Lockhart referred to. Now, it is hard to know whether it is just mostly wishful thinking or whether there is something real there—although his saying it and my saying it sort of reinforces it a little. But it is the first time that I have heard such news in a very, very long time. Retailers are quite pessimistic, however, because they are expecting the increase in energy prices to limit sales, especially among lower-income customers, despite the tax rebates.

Despite the soft economic conditions, the most prominent concern that we have heard from our business contacts across a variety of industries is the run-up in commodity prices and other prices. Thus far, firms have resisted passing along their rising costs to customers, to the extent that they could, but many firms tell us that they have gone as far as they can on holding the line on their own prices and plan to raise prices further in the next few months. Some firms are including general cost-increase clauses in their new contracts. Earlier we saw various sorts of fuel surcharges added onto prices, but now contracts are being written in a way that includes broad cost-adjustment increases. This is still only anecdotal evidence although it has been referred to—I think President Fisher made a couple of comments in this regard. But it may be yet another early warning sign that inflation expectations cannot remain in check indefinitely in this current environment. In June, the prices-paid index in our business outlook survey of manufacturers rose to the highest level it has been since 1980. Manufacturers and firm contacts across a wide range of industries say that they expect their input prices and the prices of their own goods to increase further over the next six months. They see no abatement of price pressures in the near term or medium term and are very pessimistic about inflation.

The national economic situation is similar to what I see in my own District, and it is an uncomfortable situation for all of us. The data we have received on economic activity over the intermeeting period have come in slightly better than I expected, but the continued price increases, particularly in oil and commodities, have been a very unpleasant development. Certainly, economic conditions remain weak, and the recent positive news may prove to be transitory. From the financial side, credit spreads have fallen, bond issuance has risen, and it appears that financial market functioning has at least improved. In my view, although downside risks to growth remain, the tail risk of a very bad outcome has clearly been diminished.

I expect GDP growth to come in around 1.7 percent this year—only marginally higher than my April projection—before picking back up to trend of around 2.7 percent in 2009-10. Despite the upward revisions in the Greenbook baseline, my forecast remains somewhat more optimistic for growth in 2008 and 2009 than the Greenbook. In fact, my forecast is similar to the Board staff's "upside risk" alternative scenario, which essentially removed the downward adjustment factors the staff added to build in more recession-like features caused by the financial turmoil and other factors not captured in their baseline model, which is what Dave was mentioning earlier.

My concerns about the inflation outlook have increased since our last meeting. I am not alone. Inflation has become a predominant concern for many businesses and consumers, and you only have to read the newspapers to see that. Obviously, monetary policy cannot control the price of energy, but we do have a responsibility to act to keep broad-based inflation under control. Contributing to the increase in inflation risk is not only the surge in energy and other commodity prices; it is supported also by our own accommodative stance of monetary policy. Short-term inflation expectations and headline inflation measures are up significantly since our last meeting. So far, core inflation increases have been modest, and long-term inflation expectations remain, although volatile, within a tolerable range. But if we continue to maintain the real funds rate well below zero, despite inflation that is well above acceptable levels, can we really expect inflation expectations to remain anchored? We must remember that longer-term inflation expectations tend to lag inflation not to lead it. If we wait until these measures rise, we will be too late.

Apropos of President Evans's question about wages, I have been troubled by stories in the press suggesting that we can be less concerned about inflation than we were in the 1970s because wages haven't risen and labor unions are less prominent. These stories suggest that the wage–price spiral caused the unanchoring of inflation expectations in the '70s. But I think this gets the direction of causation backwards. In my view, the story of the '70s was that the public lacked confidence in the central bank's commitment to price stability—it didn't believe the central bank would take the necessary steps to bring inflation under control. As a consequence, inflation expectations rose and wages rose. It was the higher inflation and the lack of credibility that led to higher wage demands.

The key to avoiding such a situation, in my view, is maintaining the credibility that the Fed has worked so hard to achieve. The Board staff memo on optimal monetary policy in the context of higher oil prices illustrates the importance of maintaining credibility, and I want to thank the staff for their efforts in this regard. I think it was an excellent piece of work. As they clearly say, the critical factor in containing inflation through an expectations channel is the belief that policymakers will always adhere to a full-commitment rule. When the central bank is unable or unwilling to commit in a credible manner to future policy actions or to a long-run inflation goal, the result is both higher inflation and lower output. In the real world, of course, full commitment can never absolutely be achieved. But beliefs about which regime better approximates reality are informed by the actions taken by the central bank to maintain its commitment to price stability.

I believe that the FOMC has done a good job with our words—including FOMC statements, minutes, and speeches—in helping to anchor longer-term expectations. I believe the Chairman's speech at the Boston Fed conference earlier this month delivered a well-articulated and important message about the importance of keeping longer-term inflation expectations anchored. But our credibility rests on more than just words. We must act in a way that is consistent with our hard-earned reputation, or our credibility could soon vanish. To underscore our words, we should take actions and take back some of the insurance we have put on in the context of elevated downside tail risks.

Given recent economic developments and the improvement in financial market functioning, coupled with our accommodative stance of policy, it seems pretty clear to me that, if the economy continues to evolve as it has over the past couple of months, we should move to raise the funds rate. This is also the view of market participants, whose expectations for policy have steepened considerably over the intermeeting period. My forecast, therefore, incorporates a monetary policy path that is steeper than the one in the Greenbook. I assume that the funds rate will reach 2.75 percent by the end of 2008 and move up to 4.5 percent by the end of 2009. This steeper funds rate path is necessary, in my view, to deliver inflation that is declining back toward our goal.

Regarding the suggestion by the Subcommittee on Communications on lengthening the forecast period, I think it can be a very useful device, and I support it. My preference, however, is for option 2, although I think option 1 could work just as well. I'm for option 2 partly because I, too, am less confident about forecasting whatever the dynamic adjustment process happens to be, and so just going to year 5 I think would be useful. Omitting year 4 is not omitting any information that is terribly informative, as far as I am concerned. I am a little reluctant to go to some longer-term average like five-to-ten years because I think that muddles the communication picture and may signal a weakening of our commitment about the timeframe over which we think we can really achieve some objective. So I am most comfortable with option 2, or I could be happy with option 1 as well. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Economic activity in the Fifth District has remained soft in recent weeks. Our retailers report declining activity in June, especially in autos. We are still hearing scattered reports of delayed or canceled new construction projects, either because of a lack of financing or because demand is expected to decline. Our survey measure of manufacturing activity, which by the way covers a manufacturing sector bigger than the Philadelphia and the Empire indexes combined, [laughter] has edged lower in the last two months; but exports continue to be a bright spot with reports of robust outbound activity at area ports. Manufacturing contacts report some success in passing on rising energy and transportation costs to their customers, and their indexes of expected six-month-ahead manufacturing price trends, both for prices paid and prices received, reached new record highs for the 14-year history of those series. I, too, have heard scattered reports in the last couple of weeks of employers contemplating providing extra compensation boosts to their employees to make up for rising energy costs.

On the whole, I think the risk of the national economy sinking into a serious recession has receded, and the growth outlook has edged up a bit. I was relieved by the strength in retail sales in May as well as the upward revisions for April and March. The ISM indexes have steadied at right around 50 over the past four months; and although the labor market has been weak, it has not yet shown the accelerating declines that I feared. The Greenbook projection for

Q2 real GDP has been revised from minus 1.4 to plus 1.7, and we have made a similar adjustment in our own projection.

There remain plenty of reasons for concern on the real side of the economy, of course. Real disposable income has suffered with the fall in employment over the last half-year, and the rising cost of gasoline is taking its toll as well. The continued fall in housing prices has cut into household net worth and could contribute to a rise in consumer saving. Stimulus checks might be playing an important role in supporting consumer spending right now; it is not clear how much. But I am concerned that, when the stimulus effects wear off later this year, we may find that the underlying trend in consumer spending is fairly soft. Commercial construction also remains a potential risk, I believe. There is a bit of a disconnect between the surprisingly strong data on nonresidential construction and the reports of slowing that we keep hearing from regional contacts. This suggests that the numbers reflect projects initiated before the beginning of the year and that commercial construction is likely to soften later this year and to be a drag next year. Despite all of these elements that could depress growth, I think the economic situation has undoubtedly turned out better than we expected at the April meeting because of the better-than-expected consumer and business-investment numbers. Greenbook now forecasts a period of low but positive real growth, significantly better than the experiences of the last two fairly mild recessions, and I think that is about right.

Inflation is a growing problem, though. CPI came in at an annual rate of 8 percent in May and has averaged 4.9 percent over the last three months. The core intermediate goods PPI is increasing at double-digit rates. Oil prices have risen 16 percent by my calculation since the last meeting. Retail gas prices are up 13 percent. Changes in inflation expectations since the last meeting vary with the measure that you choose. But my reading is that they continue to deteriorate. In any event, they are above levels consistent with price stability. The Michigan survey numbers for inflation expectations have risen notably, especially for the one-year horizon. The TIPS-based measure of expected one-year inflation five years forward has increased 30 basis points since the April meeting, and although the five-year, five-year-forward figure has been stable since then, it is still quite close to the highest value it reached at any point last year. It is popular, as many have noted around the table, to cite the stability of compensation gains as evidence that we are not seeing a wage–price spiral. I have done it myself recently. But I share the concerns expressed by President Evans and others around the table about that being a lagging indicator. I am concerned that, if we wait until we see rising inflation expectations showing up as wage pressures, we will have waited too long. I noted in just a casual glance at the data from the 1970s that, although wage acceleration was a prominent component of the acceleration of inflation in the late 1960s, it was largely absent in the accelerations that occurred in ’74 and ’79.

I think monetary policy is quite stimulative right now. Using the Bluebook’s standard approach of subtracting four-quarter lagged core inflation, the real funds rate now stands just below zero, about where it bottomed out in the ’91 recession and a good deal above its trough in 2004. But I don’t think lagged core inflation is the best estimate of overall inflation now. I am drawn to the Bluebook’s real rate estimate, new in this edition, that uses the Greenbook’s projection for headline inflation. Using that measure and going back and reconstructing it for the past, the real funds rate is now minus 1.3 percent, and that is substantially lower than its troughs in the last two recessions, which were right around zero. This is a lot of stimulus, arguably way too much given the improvement in the growth outlook, the reduction in downside risks, and the continuation of inflation pressures. I think withdrawing the stimulus is going to be challenging, however.

About the extended projections, I am not convinced that the benefits exceed the cost. I don't think it is going to provide much help on communicating an inflation objective. I think it will show about as much dispersion as our third-year forecasts show now. In any event, I haven't noticed much of a decline in the volatility of inflation expectations since we began releasing projections on an accelerated calendar late last year. Moreover, I think those steady-state or longer-run projections are just going to tempt people to think that we have an unemployment rate target and a growth target. That some politicians have suggested that we actually adopt such makes it dangerous to engage in any exercise that seems to comply with that suggestion. Besides, I am not sure who cares about our steady-state growth forecasts besides maybe some business-cycle-model calibrators. But we are likely to get our steady-state growth forecasts from those people in any event, so I am not sure that is going to be very helpful. I don't think we should bother with these extended forecasts. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Why don't we take a break until 4:45 and have some coffee. Thank you.

[Coffee break]

CHAIRMAN BERNANKE. Why don't we reconvene. President Bullard, whenever you are ready.

MR. BULLARD. Thank you, Mr. Chairman. The District economy continues to be sluggish. Severe weather, combined with a very wet spring, is hampering agriculture in some areas. Major flooding has caused significant damage already, and the situation continues to develop. Many business contacts in the District emphasize energy costs along with some other high commodity prices as an overriding concern. Most of the descriptions I have encountered concern businesses and consumers scrambling to adjust to new pricing realities. Many contacts are reporting skittishness over the inflation outlook, fueled by dramatic increases in key commodity prices. Many contacts with deep experience in the commodities markets remain convinced that market manipulation or speculation is behind the run-up in commodity prices across the board over the past several years. This belief is widespread and deeply held. Many predict a crash in market prices of these commodities once the bubble bursts. My assessment is that this very strong belief may, by itself, have important macroeconomic implications. Businesses and households may be reacting very differently to price increases that they see as temporary, as opposed to their reaction if they view price increases as permanent and unlikely to reverse.

Reports on the level of economic activity are decidedly mixed. The housing sector remains in a deep slump and subject to a widespread shakeup. Business in the energy sector continues to boom. High energy prices are affecting the logistics business, which has to try to be profitable at higher prices with reduced demand. Still, a very large retailer reports brisk activity, and a large technology firm is essentially unaffected by the macroeconomic slowdown. Recent data on the U.S. economy have been stronger than forecast, keeping economic performance weak but avoiding a particularly sharp contraction. The worst outcomes stemming from financial market turmoil have failed to materialize thus far. There is, to be sure, still some potential for additional upheaval, depending in part on the managerial agility among key financial firms. However, the U.S. economy is now much better positioned to handle financial market turmoil than it was six months ago. This is due to the lending facilities now in place and to the environment of low interest rates that has been created. Renewed financial market turmoil, should it occur during the summer or fall, would not now be as worrisome from a systemic risk perspective. In addition to this lessened risk from financial markets, I see the drag from housing dissipating during the second half of the year. Most likely we will also see a moderation in energy price increases. Output growth is, therefore, likely to be moderately stronger going forward.

Policy was very aggressive during January and March of this year. This was, in part, a preemptive action, insurance against a particularly severe downturn brought on by financial contagion. This was a very real possibility, but it did not materialize. This has created a situation with more stimulus in train than would have been intended had we known the outcome in advance. This is putting upward pressure on inflation and inflation expectations in the second half of this year. Policy has to turn now to face this situation.

On the long-term projections, I think it is a good idea to put down long-term projections. I am happy with any of the options. I have a slight preference for option 3. I think a trial run would be good. If the objective is to name these numbers, such as an inflation target or the potential growth of the economy, another way to do it would just be to name those numbers and not have it tied to any projection or any particular year. We could just say, “This is what I think the inflation objectives should be. This is how fast I think the economy could grow in the absence of shocks. And this is what I think the unemployment rate would be if output were growing at potential and inflation were at target.” You could just name those numbers. You wouldn’t have to say five years away or ten years away, which kind of brings in new long-run factors that you might not want to get into. Thank you.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. The last two months have brought an interesting shift in my conversations with my business contacts. Their concerns have shifted from problems in financial markets to the rapid increase in input prices. Energy prices are the focus nationwide, but steel prices are also capturing the attention of the business people in my District. Several manufacturers and builders noted that the price they pay for steel has almost doubled since the beginning of this year. Clearly, businesses are worried about signs of growing price pressures, but their reactions to these price shocks tell a more complicated story. Many manufacturers have not been able to pass on price increases, resulting in a clear loss to profit margins. These businesses often report cost-containment or efficiency programs that will affect their hiring and capital decisions for months to come.

Interestingly, the consumer price data show a similar dichotomy. My staff noted that our primary measures of core inflation are not providing a consistent story about the path of underlying inflation. In the May CPI report, roughly one-third of the weighted price changes increased at rates above 5 percent, and roughly one-third of prices changed by rates less than 1 percent. For example, while energy costs were up strongly and prices for a number of general service components have been drifting higher, large declines in apparel and vehicle expenses are imparting significant offsets. The 16 percent trimmed mean indicator showed an alarming 4 percent rise in prices, while the median rose just at 2.2 percent. The weight of price changes in the 1 percent to 5 percent range was unusually small, making it difficult to estimate the central tendency of the price change distribution with much confidence. So this makes it difficult to get a good read on where future prices are headed.

My District business contacts remain pessimistic about growth prospects. District retail reports focused extensively on the likely effects of gasoline and food prices on the purchasing decisions of consumers. Many manufacturers, builders, and distributors are facing complicated output and investment decisions in the context of input price growth and weaker markets. Overall, most of the business people that I talk with are still quite cautious about their business plans, despite the fact that most of them have found sources of credit and terms that are not too elevated from what they have seen in previous years.

In the economic projections that I submitted for this meeting, I raised my near-term forecast for output growth slightly and for headline inflation slightly more. Over the medium term, my outlook continues to be for modest growth because the housing market, in my forecast, recovers slowly, actually more slowly than in the Greenbook. My staff estimated a model for national housing starts that takes into account what has happened in the past in states that have seen major increases in foreclosures. The real estate difficulties that these states faced were much more persistent than anything that we have yet seen in the national data. The bottom line of this analysis is that, if the patterns of past housing cycles from the states that experienced the boom–bust cycles are repeated at the national level, then housing starts should remain relatively weak over the next couple of years. Supporting this analysis, three of the large regional banking organizations in my District are increasing their loan-loss provisions significantly in the second quarter based on the continued deterioration in the housing sector. Based on current projections, these institutions are projecting housing sector credit losses to accelerate in the second half of 2008 and to continue into 2009. Currently, the weak output growth contributes to my forecast of declining inflation rates, especially the core rate, but I also see evidence supporting that view in the “less worker bargaining power” scenario that is in the Greenbook. My contacts see very little price pressures coming from labor costs now or in the near future.

Finally, implicit in my forecast for output growth and inflation is a fed funds rate path that includes increases later this year and into next year. Although additional risks to growth remain, the primary risk to my forecast concerns input prices and inflation expectations. If commodity prices continue to accelerate, they are going to put upward pressure on both headline and core inflation and downward pressure on output. That environment could lead to a highly undesirable increase in inflation expectations. On the positive side of risk to the outlook, I think that the fed funds rate actions that we have taken, in conjunction with the actions that we took in August to bolster market liquidity, have improved confidence, and I have substantially lowered the odds I had placed on financial market meltdown and on a severe recession. In that sense, since our meeting in April the downside risks to my outlook for economic growth have lessened somewhat, and the risks to my inflation outlook have moved up somewhat.

Regarding the issue of providing longer-term forecasts, I have long supported efforts to clarify the underlying objectives of FOMC participants by providing our longer-term economic projections. Of the proposals that were offered by the Subcommittee on Communications, I favor reporting the average values for output growth, unemployment, and total inflation expected over a five-to-ten-year period—option 3. The features of these five-to-ten-year projections that I find attractive are that they indicate where the economy might converge and don't imply too much knowledge of the path to the long run. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. Most of my contacts continued to report sluggish domestic demand, and they are not currently seeing any improvement in activity. In addition, their comments often focused on the substantially higher costs that they are facing for a wide range of nonlabor inputs. With regard to business activity, much of what we heard about the District and the national economy was a rehashing of preexisting developments. At our last meeting, we felt that there was substantial risk of a further softening in second-quarter growth, so the absence of new news is a positive development. With regard to specific sectors, exporters I have talked with continue to thrive, and steel producers are doing quite well. But any business associated with housing markets is very weak, and the motor vehicle outlook continues to worsen. All Detroit Three CEOs are expecting light vehicle sales to be less than 15 million units in 2008.

The Seventh District has experienced substantial flooding in recent weeks, particularly in Iowa. We have been in contact with state officials and numerous businesses. The corn and soybean crops have experienced significant losses, though the range of estimates is wide. Higher estimates for lost corn output in Iowa are about 10 percent. That substantial loss would represent a national crop loss of just about 2 percent. In addition, although there have been transportation disruptions, especially on the Mississippi, our contacts expect these to be short-lived. So overall, our sense is that the economic damage seems to be relatively contained, especially in comparison with the floods in 1993, which hit a much wider geographic area and affected activity for a longer period of time.

Turning to the national picture, the incoming data regarding growth generally have been positive. Indeed, the string of upward quarterly forecast revisions continues. In particular, I have been impressed by how much second-quarter GDP growth forecasts have moved up. This is not to say that we are out of the woods. Clearly, the continued difficulties in the housing and credit markets as well as the unrelenting increases in energy prices pose important downside risks to activity. Our Chicago Fed national activity index continues to be in territory I would characterize as a recession—the three-month moving average is minus 1.08 this past month. Still, the risk of the adverse feedback loop that concerned us so much clearly seems less likely today. Importantly, the financial situation seems better. Though conditions are still far from normal, institutions have had time to cope with bad portfolios, much as President Bullard mentioned. They have made significant progress in raising capital and have increased provisions against losses. I think our lending facilities have helped financial institutions gain time to facilitate the adjustment process. It seems well beyond our abilities, however, to engineer a return to "normal financial conditions," given the extent of financial losses and overbuilding in housing. With regard to our economic projections, we expect growth this quarter to be similar to the Greenbook; but unlike the Greenbook, we are looking for the momentum to carry forward to a better second half of the year. Beyond this year, we think growth will run near potential. This is based on a fed funds rate path close to that in the futures markets. We are assuming a fed funds rate of 2½ percent by the fourth quarter and 3¾ percent by the end of 2009.

Turning to inflation, a number of factors present a concern for inflation expectations and our ability to bring inflation down. As I mentioned, my contacts spent a good deal of time talking about materials cost pressures, and many around the table have talked about those as well. Many manufacturers were citing large increases in energy and most commodity prices, and everyone was passing along some portion of these cost increases. I have one anecdote on this: In retail, Crate&Barrel reported on recent buyers' trips to Asia, saying that prices for items purchased there would be 15 to 20 percent higher for next year. Finally, wage pressures have been subdued thus far. Still, econometric analysis by my staff reminded me that wage inflation tends to follow price inflation not the other way around. So by the time we see wage pressures, either we are not behind the curve now, or it is "Katie, bar the door!" It is probably one or the other. [Laughter] Indeed, I am concerned that large and persistent changes in costs and in relative prices of high-profile items, such as energy, could change the inflationary mindset of businesses and households. The resulting increase in inflation expectations would pose a difficult challenge for monetary policy. Maybe it will end up being okay; maybe surveys will be right. But it is a big risk, and that risk is a bit large for my comfort.

Looking ahead, we all see the substantial upside risk to price stability posed by the pass-through of higher costs and any possible increase in inflation expectations. While I hope I am wrong, I feel that we may need to accept a somewhat longer period of resource slack than we would like in order to address these risks and put inflation more firmly on a downward trajectory. Under our projection for GDP growth, the economy does not close the modest resource gaps we project will be in place at the end of 2008 until beyond the forecast horizon. Along with a flattening in energy and other commodity prices, such gaps should be sufficient to contain inflation expectations and bring overall PCE inflation near 2 percent in 2009 and 2010. That is our expectation. But my base case does not have inflation moving below 2 percent until after 2010, and that is even with more aggressive policy tightening than the Greenbook path.

Now, turning to the long-term projections, I think that our forecasts for 2010—or at least the way that I think about it—do suffer from some difficulties. We would like to mention in the write-up that, at the end of the period, the range is between 1½ percent and 2 percent, and we can infer policymakers' preferences from that. That is one interpretation. Given the inflationary pressures, that is harder and harder for many people to come up with. I think in some cases it requires a monetary policy response that is beyond what most people would expect that we could actually do. So I don't try to force my inflation forecast into my preferred range if it is too hard. Based upon monetary policy, it is more medium term. So I do tend to favor a longer period. I am somewhat indifferent between the first and the second options. I don't really see a lot of difference, but something that has a five-year forecast I think is useful. Whether or not it has the fourth year and whether or not it is core PCE or total are less important issues.

One argument for this is an interesting body of research, which I have been exposed to only at conferences—and Jim probably knows it better than most—on learning and whether individuals in the economy can learn these rules without a variety of information. Some of the better papers that I have seen on that remind us that you need more pieces of information than just what the target is, whether it be 1½ percent or 2 percent. You need some type of contour when people are learning with simplistic learning rules, like least squares learning. So I think a bit more contour on the forecast would be helpful. In my mind, that pushes you toward the five years of forecasting as opposed to a steady state or a five-to-ten-year forecast. I think that's an important element. On the trial run, I think we could do it sooner than that, but I know a lot of staff resources are involved. So I favor sooner rather than later. Thank you.

CHAIRMAN BERNANKE. Thank you. President Stern.

MR. STERN. Thank you, Mr. Chairman. Well, like some others—maybe many others—I, too, have raised my forecast for growth for this year, basically just extending what's happening in the first half of the year, and I've raised my projection for growth next year marginally as well. Still, I must admit to some significant reservations about doing that. As I look at the outlook and as Larry Slifman pointed out, there are a number of weaknesses, concerns, or downsides that you can pretty readily identify—tight or tightening credit conditions, a still significant decline in housing activity, a decline in housing values and the negative wealth effects associated with that, the run-up in energy prices, and so forth. Many of those will adversely affect the consumer, it seems to me. When we have that high a number of what I would call identifiable negatives, I wouldn't be surprised if we had one or more quarters of significant economic contraction still ahead of us despite the recent relatively good news on the growth side.

At the same time, the news on inflation hasn't been particularly positive from my perspective, and that's particularly true if the Greenbook is right and some of the relatively favorable recent readings on core inflation are likely to prove transitory. I'm struck by the volume of questions I get and concerns expressed about inflation when I'm out talking with business groups or giving a speech to a more general audience. Now, a lot of this, of course, is focused on or stems from what's happening to energy prices and food prices, which are highly visible and which people experience directly and frequently. Nevertheless, I'm concerned that all of that makes inflation expectations a bit more vulnerable, maybe more than a bit more vulnerable, than they have been to this point.

My reading of inflation expectations per se is that they, at least the longer-term expectations—and I'm relying mostly on the TIPS data here—have been remarkably well anchored so far. Perhaps a partial explanation for that is that core inflation really hasn't moved much since 2003–04. That's a bit of a double-edged sword because it has locked in a bit higher than I might have preferred. Nevertheless, stability that has been maintained is there. Perhaps it goes some distance to explain our continuing, or what appears to be our continuing, credibility on that issue. Now, the Greenbook does have some inching up of core inflation from here. If they're right and that's all we get, then I would be surprised if that led to a real deterioration in inflation expectations. But that may prove to be a big "if."

As far as extending the projections goes, I'm in favor of doing that. I don't think there will be a huge payoff, but I think it will provide some additional information to us internally and to the public. I don't have a strong preference about which alternative we go with. Maybe the trial run will point out some advantages or disadvantages that we didn't anticipate. At the moment, if I had to vote, I'd probably vote for the second alternative, which would be to split the difference, put down the fifth year, and let it go at that.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN GEITHNER. Thank you, Mr. Chairman. I think we face an extended period of relatively weak economic growth, quite weak domestic demand growth, and overall growth significantly below trend. I think this is both likely and necessary. It’s likely because we have more weakness ahead as the housing drag continues, financial headwinds remain acute, the economy adjusts to the very large and sustained energy price shock, the saving rate increases, and global demand moderates. It’s necessary to achieve a reasonable inflation outcome over the forecast period.

Our central projection has the U.S. economy growing, though at a rate significantly below potential, and then recovering gradually toward trend over the next year. This is our modal forecast; and in this forecast, the economy just skirts a recession. The output gap begins to narrow over the forecast period. Housing prices begin to stabilize only late in ’09, after a cumulative peak-to-trough drop of roughly 12 percent, using the OFHEO repeat sales purchase-only index. Net exports provide a significant, though fading, boost to GDP growth this year and next. We project a very gradual, very modest moderation in core inflation over the forecast period. Of course, this forecast depends on a lot of things happening. It depends on expectations remaining reasonably well contained, energy and commodity prices following the futures curve, the dollar only modestly weaker, somewhat diminished pressure on resource utilization here and around the world, and continued moderate growth in compensation and unit labor costs. Our policy assumption builds in significant tightening—a significant move up in the fed funds rate over the forecast period—though not as soon as the market now expects.

The uncertainty around and risks to this central projection are substantial. On the growth front, although we believe the risks of a very deep, prolonged economic downturn have diminished—not on their own but because of the force of the policy response so far—we still think the risks are weighted significantly to the downside. The main risks remain: the ongoing stress on financial markets; the risk that this further restricts the supply of credit, exacerbates financial conditions, pushes home prices and other equity prices down more further tightening credit conditions, et cetera; a steeper-than-expected rise in the saving rate; and the adjustment to the ongoing drag from energy prices.

On the inflation front, we—I think like the rest of you—see the risks ahead tilted somewhat to the upside for many obvious reasons. I think it's true that, looked at together, the mix of measures of inflation expectations suggests that private agents may have less confidence in the FOMC's commitment to price stability than they did in previous periods when total inflation was running significantly above core. So this is going to be a very challenging period for policy. It's not all terrible. Productivity growth is a little higher than we thought. Underlying inflation and long-term inflation expectations certainly could already have been showing signs of a more compelling, immediate danger. Spending has been somewhat stronger than confidence measures would have suggested. The current account balance has narrowed significantly. We are seeing very substantial changes in behavior across the U.S. economy in the consumption of energy. So there are good things to point to. But in the two dangerous areas—in the financial sector and in the global inflation environment—I think things are materially worse than at our last meeting.

Again, the risk of inflation is readily apparent. Apart from the numbers, I agree with many of you who said that the alarm and concern is materially higher and materially different today across a broad range of firms in different industries than it was even as recently as two months ago. We have to be worried about intensified pressure on compensation growth even with the degree of slack that we now see in the labor market. Although firms are absorbing in margins a significant part of the increase in unit costs—and a lot of the complaining that we hear is about margins that are coming down and those that are expected to come down—I do think that firms are demonstrably able to pass on more than they would have been before. Of course, what makes it very hard for us is that the pressure on resources is coming largely from outside the United States and the other major economies, from countries that are growing significantly above trend with central banks that are not independent and are running very expansionary monetary policies. I think we are really seeing an alarming acceleration in inflation rates in large parts of the world for the first time in a couple of decades. If these countries do not tighten monetary policy sufficiently and reduce energy price subsidies materially, then we will have to be tighter than we otherwise would have to be.

In the financial world, although I think it's true that the market believes there has been some significant reduction in the risk of an acute systemic financial crisis, I think we have a long period of acute fragility ahead. We're in the midst right now of more material erosion in sentiment, spreads, asset prices, balance sheet pressures, and liquidity in some markets. Overall financial conditions are probably somewhat tighter than when we last met. The financial headwinds have intensified again, and they are likely to remain intense for some time.

Again, I think this is going to be a very challenging road ahead. It is important to recognize that the current stance of policy embodies not just the fed funds rate today, relative to our best measure of equilibrium, but also the expectations about policy that are now built into the Treasury curve. That policy today does not look that accommodative. If you look at the Bluebook charts and at a range of measures of real fed funds rates today relative to different measures of equilibrium, policy is less accommodative just on that simple measure than it was at the most accommodative point of the last two downturns. That said, we're going to have to tighten monetary policy, and the question is when. My sense is soon but not yet. Right now we still face a very delicate, very fine balance and have to be careful not to declare victory prematurely on the growth front or on the financial front. I think it's going to be hard for us to do that until we see that we are closer to the point at which we can confidently say that we start to see the bottom in housing prices. Also, we have to be careful not to raise expectations too much that we're on the verge of an imminent, significant tightening in policy. It is a difficult balance. We should take some comfort from the fact that the market believes we will do enough soon enough to keep those expectations down.

On the projections front, I have a complicated view, Mr. Chairman. I apologize. If we are going to change, we should focus on stuff that will change things significantly. I don't see huge gains from the changes in these options to our current communication regime. If we're going to change, a trial run in the fall is fine. But I think the fall is too soon to change. We need to get through this thing. We have a very challenging period with a lot of stuff going on, and I think we need to use every molecule of oxygen in the System to get through this mess. I don't think this projections change materially helps the communication challenge in getting through this mess and may complicate it in some ways.

If we are going to do something beyond our current regime, I would favor doing something slightly different from this. I would favor at least considering publishing the average of our individual views on what the desirable long-run rate of inflation is, an average of our judgments of what trend growth is today, and maybe what the natural rate of unemployment is today. We know very little about what those latter variables—trend growth and the natural rate of unemployment—are five to ten years ahead. It is very hard for us individually to put much confidence on whatever the path is toward that point. Our current regime for aggregating our forecasts the way we do, tossing out the individuals, makes our basic forecast not particularly useful as a prism. So I would focus on doing something slightly different to change the regime, and I wouldn't do it this soon. If we're going to change, let's debate the big things and not spend too much time on things at the margin, which fundamentally aren't going to offer too much promise relative to the level of ignorance we have or relative to the complexity that people face in reading any particular meaningful value in the aggregation of our forecasts the way we now do them.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. My forecasts for both economic growth and inflation are within the central tendency of the rest of you and a little stronger than the staff's outlook. In fact, my 2008 projections for economic activity for the second half of the year were revised very little from two months ago. Growth turned out to be stronger than I expected in the first half, and that carries some weight going forward; but financial conditions are tighter with higher bond rates and lower equity prices, and of course oil prices are a lot higher and that will damp demand going forward. So I expect slow growth in the second half followed by expansion around, maybe a little above, the rate of growth of potential in '09 and '10, with the same basic story that everybody else has: drags on activity from declining housing activity, decreasing wealth, tight credit conditions, and higher petroleum prices. All of those drags will abate over time, allowing the natural resilience, with slightly accommodative financial conditions, to show through, and I assume a gradual tightening of monetary policy beginning next year.

Incoming information on prices and costs has been mixed. Oil and food price increases will raise headline inflation, but core has been stable and has come in a little to the soft side of expectations, and labor costs as yet show no signs of accelerating. Going forward, I see a sharp decline in headline inflation later this year with the assumed leveling-out in oil prices and a gradual decrease in core as economic slack inhibits wage and price increases, offsetting the pass-through from oil prices. Now, that's my central tendency. I consider the odds on that being realized to be even lower than usual, and the usual odds are disappearingly small. It seems to me that the defining characteristics of the current situation are uncertainty and risk. We're facing multiple shocks, many of them unprecedented in size and persistence, in the housing market, financial markets, and commodities. The outlook is full of puzzles, and in my mind anyone who thinks he or she understands what's going on is either a lot smarter than I am or delusional—or both. [Laughter]

I class the risks for both output and headline inflation as greater than usual, and let me tell you about some of the things I wrestled with. Financial conditions, are they accommodative? I continue to believe that the 2 percent nominal funds rate is not indicative of a highly accommodative financial condition, given the current state of financial markets. That is, in my view we have limited insurance. Spreads have widened sufficiently over the past 10 months both for long-term and short-term credit, and bank terms and conditions for loans and lines of credit have tightened enough that only a small part of the drop in the fed funds rate is showing through to the cost of capital for median households and firms. The staff's flow of funds estimates show a marked deceleration in the growth of both household and business debt in the first half of this year, from 10 percent for households last year to 3 percent in the first half of the year and from 12 percent for businesses to 7 percent in the first half of the year. A 2 percent fed funds rate will become accommodative as spreads narrow and financial functioning returns more toward normal, and that's one reason I assumed a gradually rising federal funds rate over 2009 and forward.

The evidence about improving financial markets over the intermeeting period was decidedly mixed. Some spreads did come in from late April. Investment-grade businesses tapped bond markets in size, but almost all spreads remain unusually wide. We were reminded of the fragility of the evolving situation, especially in the financial sector, with the worries about continuing credit problems resulting in sharp declines in equity prices on financials and an uptick in their CDS spreads, which had narrowed the previous month or two; the downgrading of monolines and investment banks; and the increasing attention to the problems of regional banks. It would be surprising if these were not reflected in even greater caution by banks and other lenders in their lending practices. Also the securitization markets, especially for non-agency mortgages, are not functioning in a way to replace bank intermediation. This is going to be a prolonged process of re-intermediation, deleveraging, and building liquidity with an uncertain endpoint. Like the staff, I assume that the conditions return to something approaching normal over the next 18 months, but the risks are skewed toward an even longer recovery period.

The second topic is household spending. Households are facing a huge number of adverse shocks: higher oil prices, tighter credit, declining house prices, and rising unemployment. It's not surprising that confidence is at recessionary levels. It is surprising that spending is so resilient. I assumed that the saving rate would rise very gradually once the tax rebate effects wore off, but I think a more abrupt and sizable increase in household saving is a distinct downside risk. What about housing? Some sales measures have shown a few tentative indications of leveling off. I was encouraged by President Lockhart's report from Florida, but I'm also struck by renewed pessimism about housing in the financial markets. Equities of construction firms and builders have declined after stabilizing, actually rising, earlier this year. ABX indexes have turned down, reversing earlier improvements; and perhaps underlying the previous two developments, the Case-Shiller futures indexes remain in steep decline, though today's information was less weak than expected. The view of the financial markets, anyhow, is that the light at the end of the housing tunnel is receding, and declines in expected house prices must be an important reason for the erosion in market confidence in financial intermediaries.

In sum, although the incoming data may have reduced the threat of a sharp drop in spending, in my view there remains a very pronounced downward skew around my outlook for modest growth in H2 and a strengthening next year. However, that downward skew around output did not translate into a downward skew around my forecast for headline inflation. In fact, I saw the risks on headline inflation as tilted to the upside, though roughly balanced around the gradual decrease in core. I think the upside risks result from two additional areas of uncertainty. One area is commodity prices, though the trend increases in commodity prices over the past few years can be attributed to rising demands from emerging market economies relative to sluggishly responding supplies. Despite Nathan's best efforts, I really don't think we have much of a clue about the cause of the spike in oil prices this year. It has been especially striking to me over the intermeeting period, when the prices of industrial commodities have been falling on balance. Presumably prices in these markets already incorporate expectations of reasonably strong global growth outside the United States as in the Greenbook. Absent any surprises, futures market quotes ought to be the best guide, but what we don't understand can fool us, especially when so much of the relevant information involves emerging market economies, where data are sparse and of questionable value. Given our experience over the past few years, I think continued increases in commodity prices would seem to be an upside risk.

The other area is inflation expectations. I assume that as headline inflation comes down, both short- and long-term inflation expectations, especially in the survey data, will reverse their recent increases based a lot on the kind of information that President Yellen was observing about how the household survey has tended to follow contemporaneous inflation. I'm encouraged by the relatively flat readings on core inflation and labor compensation increases. Higher expectations have not so far become embedded in prices and costs, despite all the talk of passing along cost increases. But headline inflation is going to rise before it falls. Real wages will be further eroded by higher energy costs. Although this is a necessary part of an adjustment to an adverse terms-of-trade shock, it will be resisted. Hence, a further rise in inflation expectations and a stronger determination by households and businesses to act on those expectations will be a risk over coming months. With that further rise in oil prices, it's a bigger risk than it was a couple of months ago.

In terms of the long-term projections, Mr. Chairman, I think I'm fine with something like your proposal. Our objective for adding a year was to give the public a better sense of where we're going over the long term. Given the shock to the economy, that's not as informative as it was before. I think we're close to where most people would say their inflation objective was, but not for the growth rate of potential or the NAIRU. I could live with option 3 or President Bullard's alternative to that—to state exactly what our long-term expectations are instead of talking about five to seven years or five to ten years. I don't think we'll gain a lot. I don't think the costs or benefits are very large on either side of this. Our problems now are not that people don't understand where we're going in the end. I think they have a pretty good idea that we want inflation to be a lot lower than it has been. But I think they don't really understand how we're going to get either to full employment or to price stability, given where we're starting. So I think the uncertainty about our objectives is a very small problem relative to the other problems now. But if we can reinforce what those objectives are, it might help a little around the edges. I do worry, as President Lacker said, that what we say about output and employment not be interpreted as goals but rather as a judgment about the state and the structure of the economy. I am hopeful that we could take care of that in what we say about what we're publishing. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. At this point everything has been said, but everybody hasn't said it. So let me try. [Laughter] Let me make three summary points, and then I will talk about three issues that I think are harder. First, on the economy, through late May, as the

Greenbook suggests, the real economy proved more resilient and more dynamic than the consensus had anticipated. Consumer spending was moderate but positive, and the labor markets were soft, but neither was necessarily indicative of a recession through late May. Business fixed investment and corporate profits ex financials look all right. Productivity growth looks, frankly, impressive, and corporations, unlike consumers, still appear okay through the month of June—but I'm going to return to June in just a short while. In sum, my assessment of the economy reasonably approximates the average GDP from the Greenbook for 2008, but I remain considerably more cautious on the catalyst for return-to-trend growth in the forecast period of 2009 and beyond. I suspect that this is a long, slow climb with the credit channels needing to be rebuilt and that the process is still in its very early stages.

Second, let me talk about the financial markets. Financial markets continue to show tenuous but real improvements in market functioning—which, as Bill Dudley suggested, is remarkable given the weakness among financial institutions themselves. Leveraged loans and high-yield markets continue to trend toward improved market functioning. Credit spreads are well off their March highs. Credit markets, in particular, are holding up well, despite the broad weakness across equities.

Third, let me turn to inflation risks. Inflation risks, in my view, continue to predominate as the greater risk to the economy. There is more evidence of a global secular reversal of inflation trends, making the jobs of central bankers worldwide considerably more difficult. I remain worried about energy and food pass-through and the effect of a weakening dollar if our policy rates and those of our major trading partners are perceived to diverge. I would expect import prices, core inflation, and expectations to move up in the coming months even more than in the Greenbook, likely causing a policy response by our foreign peers. Commodity prices, again, with the exception of metals, have been moving up while global demand is falling, and markets have come to see this rise of some, if not most, commodities as essentially permanent. So at the end of the day, we have to be concerned about this period of above-acceptable inflation. It's crucial that broader prices do not start to rise at still-faster rates, and that could well happen if those making decisions about prices and pay expect higher inflation in the future. Anecdotes are not comforting, particularly on the price front. As a result, I think the trajectory of inflation is less favorable than in the Greenbook, thereby necessitating a policy response more significant than the Greenbook would suggest.

Let me turn to three even harder issues. One is consumer spending. We're not done with the second quarter, and my sense of what's happened in the first three weeks of June is pretty miserable. I hate to extrapolate based on three weeks of data to the trajectory of the economy. But from a discussion with contacts from three credit card companies that constitute a little more than half of the credit card spend, I would say that the views from these guys were shocking in how bad things looked in the past three to four weeks, particularly in comparison to reasonably positive news from the previous two months. It is suggestive that June will be much weaker than May, and if I add that to the figures on autos that are coming out of the Detroit Three, those are a couple of anecdotes that make me a little hesitant to declare with an exclamation mark what an enviable second quarter we've had. I also look at equity market prices sometimes as maybe telling us something. I would say that consumer companies and retailers over the last three weeks have gotten killed. So I'm a little hesitant to suggest that the second quarter is going to be strong. Delinquencies and charge-offs have also moved meaningfully to the downside in the last three or four weeks among these credit card companies, and this weakness appears to be much more focused on the coasts than it is in the center of the country. I heard that from three of three. My own view may be influenced by my take on the fiscal stimulus—it sure doesn't appear to be helping very much.

The second issue that I continue to struggle with is financial institutions. Financial institution equity prices showed significant underperformance, and some people say that is the Federal Reserve's fault. We're talking up our concerns about inflation. We're changing the Treasury curve going forward. I think that is a total red herring. The reason that financials are getting killed is an equity story. They have business models that are having a hard time delivering profits in this environment. They have had to show a very tough quarterly set of losses. I think the problems on financials have to do with financials and not with the Fed, though there is a disturbing amount of chatter in the markets that somehow we're the cause of that. I am comforted, again as Bill Dudley reminded us, that the broader market functioning has been able to withstand this dramatic financial institution weakness. Whether at some point that will give out I don't know, but I'd say that's extremely encouraging. In addition, we have to recognize that massive amounts of new capital are going to be needed for financial institutions of all sizes. Given the weak performance of virtually every financial investment from November till now, I think it is very easy to see a supply–demand problem. It is very easy to see that, with the number of banks that come to these markets, some of them at some point might not be able to find capital even at dramatically lower prices than their expectations. It is prudent for us at the Fed to think about alternative sources of more-patient institutional funding during this period.

The third issue for discussion is credit availability, especially for small businesses. This strikes me as being key to the labor market situation. Credit availability for small businesses has held up better than I would have expected four or five months ago, but pockets of weakness remain, particularly among the regional banks, which are a source of concern. I guess I've become convinced that credit lines have not been tapped out. There was a theory, one that I even had some sympathy toward, that increases in C&I lending in the last few quarters were involuntary, reflecting existing credit lines that were called upon. That strikes me as being somewhat overstated. According to anecdotes and our own survey of the terms of business lending, it does suggest that capital is still available for these small businesses to provide some strength to the economy; but again, continued weakness among the regionals could call that into question.

Let me turn finally, Mr. Chairman, to the projections. I have some sympathy for the view that Vice Chairman Geithner put forth. It strikes me that at this time the markets will see the benefits of changing our communication strategy as, yet again, pretty small. The costs are harder for me to be certain about. So if anyone is proposing to do this during the next six months, I would have real hesitancy about introducing this variable into our communication strategy amid our assessment of all the other challenges that we have. So I favor having a trial run come October, but I think we should revisit where we stand on the inflation front, the financial institution front, and the growth front before adding this to the mix. To the extent that we find the appropriate time to go down this path, I would favor option 3. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thanks a lot. Well, as I've mentioned many times before, I have thought about this as sort of a long, slow burn scenario; and as we well know, the embers are still smoldering. It seems to be less of a risk that they could re-ignite, causing a major conflagration; but there is still some chance of re-ignition, and I think there's still a fair amount of heat. Consistent with that, my central tendency view is probably closer to the Greenbook's "delayed credit recovery" alternative scenario than to the main Greenbook forecast. In looking at the alternative scenario, there's not much of a real effect on growth, but that response is due to a lower fed funds path.

Given the discussions that we've had, I think it may be very difficult to pursue something like that in this environment, particularly given higher uncertainty about inflation and inflation expectations, even if, as a number of people have mentioned, inflation expectations haven't moved up that much or you pick your favorite measure and some have moved up more than others. Given that it's likely that we had some transitory factors keeping core and headline inflation down a little lower than they otherwise might have been and they probably are going to go up, I think that dealing with the "delayed credit recovery" alternative scenario in the way that's discussed in the Greenbook makes our policy choices particularly difficult.

So let me focus briefly on why I think the delayed credit recovery or slow burn scenario is a reasonable central tendency one. I think it relates largely to our continuing challenges on banks' balance sheets, liquidity, and capital. Banks are facing very high short-term financing costs. Those LIBOR–OIS spreads are still at extremely elevated levels compared with what they're used to in funding themselves, and this is true whether they are commercial banks or investment banks. The forwards suggest that this ain't going away anytime soon. So one thing that this does is simply to cut into profitability and the ability to earn your way out of the challenges. An easy way to do it—of just allowing the machine to go forward—is going to produce less than it otherwise would. A lot of institutions rely on the Federal Home Loan Banks, but those are largely tapped out as another source of financing. We know that the monoline issue has sort of come back, and the challenges there are great. It is undoubtedly going to be leading to a lot more write-downs over the next couple of quarters. On the other hand, as President Lockhart, Governor Warsh, and some others have mentioned, there have been a few areas that seem to have opened up. The leveraged-loan market seems to have opened up a bit. People seem to be getting those leveraged loans off their books—and not even at effectively subsidized financing rates. They were proud of getting these off their books before, but they were doing it by basically just making another loan, which effectively doesn't get them off the books. Now it seems as though they are legitimately able to move this, and obviously that book is not growing. That book is shrinking.

Of course, one of the biggest challenges is in housing, and I see the shocks of some of the resets from the nontraditional mortgages continuing through '09. We're seeing very significant increases in delinquencies and foreclosures, not only in the subprime space but also in the adjustable rate space generally—that's both subprime and prime, although the levels for prime are dramatically lower. The increases are quite significant for prime ARMs, and that starts to raise some challenges for the institutions that didn't do subprime but may still have a reasonable amount of prime ARMs on their books. HELOCs have been mentioned and the inability to securitize anything that's nonconforming. We've seen very little benefit yet from the changes that allow Freddie Mac and Fannie Mae to raise those limits. Also, as many of you know, from my visits around the country to your Districts, I see that conditions in different areas are dramatically different, but in general a lot of markets remain in very difficult circumstances. One of the largest mortgage lenders in the country said that, over the last couple of months, their average FICO score on what they've been originating outside the conforming market has been 800. That's astonishingly high—so that gets back to President Yellen's comment about even with FICO scores in the stratosphere—and they claim that's an average FICO score, and they have been pulling back on the HELOCs et cetera.

On rising delinquency rates for credit cards, I didn't hear quite as bleak a view as Governor Warsh described. I wouldn't want to say a positive view. They seemed to say that it is where they would have expected it to be in this part of a cycle with increasing delinquencies. One thing that they were seeing was a little increase in payments, and so that may be one of the consequences of the stimulus check coming—that people are using it to pay down some of their credit card debt. But a big challenge that they have been seeing is the so-called roll rates—that once someone begins to go delinquent, they tend to roll right to full loss rather than getting some recovery. It suggests that, when people get into trouble, they are in fairly deep trouble. All of this means that the demand for capital is going to be very high going forward at these institutions as provisioning has to go up. You know, we've tapped sovereign wealth funds, institutional investors, and a lot of others. As Governor Warsh said, tapping other sources, encouraging perhaps private equity to come in, is something that's important. But how long are these guys willing to invest when over the past nine months every single investment has seen a reduction rather than an increase in value? I'm borrowing a prop from President Fisher—we have been going around and saying, "Raise capital. You're worth it." [Laughter] I hope the investment banks are going around to their shareholders and saying that also. So far there's not a lot of evidence that they have been. I think in the long run they will, but we have to worry about that.

This slow burn scenario is even more problematic in the context of what Vice Chairman Geithner mentioned about some slowing of foreign demand that I think may be coming and in the context of a fair amount of increases in interest rates that may be coming in a lot of these countries. You're going to be seeing some credit tightening globally, as I think a number of people have mentioned. It is more likely, unless there's a major shock, to be more on the tightening side going forward. This makes it more difficult to deal with some of the issues in the "higher inflation expectations" alternative scenario that was in the Greenbook because, when you have this financial fragility, it's harder perhaps to raise interest rates as quickly or as much as you would like because of the concerns about what might happen in the financial markets.

On inflation, I think much like President Stern and a number of others—it depends on which particular series you look at. It is hard to say that things have really become unmoored, but I think there's a lot more uncertainty in the minds of both the public and the market participants about where inflation may go. That's particularly problematic when you have the likely increase in the actual numbers coming that the Greenbook is forecasting for the next quarter or so; and in that context, dealing with some of the challenges is more difficult. But we'll talk about that more tomorrow.

On the projections, I think it is important that we continue to increase transparency over time. We structured what we did last time to make it part of a process, and I think it makes sense to periodically revisit whether we want to continue on that road. I very much prefer a gradualist approach, in principle, to add year 5 or so—as the Chairman said—but I think there's a bit of a problem in doing that because too much meaning may be attributed to it. It may be too difficult to avoid saying, "Well, we're just doing a target." If we add year 4 and year 5, even though there's not a lot of information content in year 4, I think it helps to reduce the kind of shock value of seeing that fifth year out there. Now, that's potentially a negative because, in some sense, we want to provide more information that way. But given the fragile conditions, as Vice Chairman Geithner mentioned, I don't think that we want to generate a debate on inflation targets, employment targets, and other things like that particularly right now. So maybe having a gradualist approach, by which we just extend things to year 4 and year 5, which is seen as a natural outgrowth, wouldn't be as much of a shock. Not that I think it would be shocking, but I think it might raise as many concerns and as much of a debate and distract us from the key issues that we have before us. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. Thank you, Mr. Chairman. Well, we have seen recent data that actually have been stronger than expected. Also as time goes on, there seems to be a lower probability of financial meltdown and these adverse feedback loops that we've all been discussing. But I don't think we want to become too sanguine about the current data because some very negative things are going on that might tell us that this is just very temporary stuff. In particular, it's really remarkable how weak consumer sentiment is. There is also a huge hit from energy prices, and it's going to get worse. One thing in the Greenbook is that the very low margins that we've had in refining are going to increase, so we're going to see gasoline prices that are well over $5.00 a gallon, according to the kind of numbers you're coming out with, and that is going to be a major contractionary hit to household spending. Luckily I don't drive much anymore—I'm down to less than 600 miles a year right now—so maybe that is okay, but unfortunately I'll get back to driving more in the future.

In any case, I do think that what the Greenbook has done is reasonable in terms of changing the forecast. They have a stronger first half, but the longer-run forecast, particularly regarding the output gap, is really not very different, and I think that's a reasonable forecast. My baseline is somewhat less optimistic because I feel that the "delayed credit recovery" alternative scenario was actually a nice one to put in this Greenbook, and I was glad to see it because it is very close to the way I am thinking about the situation right now. I think there's going to be a much slower recovery of financial markets than was in the Greenbook baseline because two things have to occur for us to get back to normal underwriting. This, of course, doesn't mean what we had before, which did not have serious enough underwriting standards, but something we think is realistic given the kinds of risks in the economy. Financial institutions have to have enough capital just to make loans—so there's the direct effect that we think about. But also the securitization market is clearly very impaired. Eventually it will come back, but it will need new business models to solve the agency issues that have led to all of the heartache that we've seen recently. When I think about how that is going to happen, I think the large financial institutions have to play a key role because you need somebody who will originate these loans and then will have the incentives to make sure that the agency problems are not severe. Only when that's done can they be sold off, and that requires that there is recourse, which requires that they have plenty of capital. Of course, it is a very slow process for them to build up capital in the current environment. So given that situation, I think the idea that the financial markets will be back to normal over the next year or two is a little optimistic. It's going to take a long time for this to get worked out. So the bottom-line scenario is one in which we're going to have strong headwinds for quite a time, and that's going to be important in terms of our monetary policy stance.

When I think about inflation, as you know, I put a lot of emphasis on long-run inflation expectations and on expectations about future economic slack in the economy. At this point, I do not see a major change and deterioration in long-run inflation expectations. I'll explain that in a second. I should emphasize that I say that is true so far. But an issue is whether that will change, and that's going to be very important in terms of how we manage monetary policy. The first things I look at when I think about long-run inflation expectations are, of course, the surveys of consumers. As you know, I've always been a little skeptical of them, but I think that my views are very similar to the ones that President Yellen mentioned. I have a slightly different explanation using behavioral economics. Behavioral economics tells you that surveys will rise a lot with what happens currently and overreact and that's exactly what should happen because it's a framing issue. You see very high headline inflation. You're going to raise expectations of inflation one year out. But it's very natural that you're going to raise them for the longer term, and they'll come back down when headline inflation comes down. So I really am not as concerned about the survey expectations being a long-run problem as long as inflation comes back down. I think there are good indications that it will, given that headline is so much higher than core and that core has actually stayed very stable.

The other things that I look at, and look at much more seriously, are the Surveys of Professional Forecasters (which have basically moved up a bit but not very much and have not gotten much out of the range in which they have been in the past) and then information from financial markets, that is, inflation compensation. Again, that has not risen recently, and actually it's better than it was at its peak. So I don't see a huge problem there. What this tells me about the inflation forecast is—you know, I'm a 2 percent kind of guy on PCE, and I'm still a 2 percent guy—that even though headline inflation is very elevated, we're going to see over the forecast period that inflation will come back down to around the 2 percent level both on the headline and on the core. However, though my baseline on this is that inflation will return to a level that, by the way, I am comfortable with as an inflation objective, I do very much worry that inflation expectations could be more fragile in the current environment. So it's not that I think we have to do something now. But we do have to be extremely vigilant to see whether inflation expectations are actually starting to move in an undesirable direction, and if so, we will have to take action. The challenge may be that we have to take action when unemployment is still rising, but what is key is that we have to be aware of that. My modal forecast is that it isn't going to happen, but I think we have to be ready to deal with it and deal with it quickly. As you know, I'm not a believer in gradualism in circumstances such as we are in currently, and I think this applies to dealing not only with financial disruptions but also currently with inflation expectations. We have to be willing to move very quickly in that context.

Let me turn to the issue of long-term projections. You will not be very surprised to know that, in fact, I'm a supporter of this. This Committee has actually been well served. Even though it is not my normal personality—as you know, I like to move fast on things—we have moved in an evolutionary process in terms of communications, and I think that has worked quite well for us.

This is just an obvious next step. Our communication strategy in terms of the long-run projections now has an important flaw in that we are not providing the information that we intended to provide, and it needs a fix. We now realize that that's the case. It's particularly relevant concerning information about potential output growth and the NAIRU. I do share the concerns that President Lacker mentioned on these, and I have talked about this in many speeches. I think this can be handled by speeches—in particular, by the Chairman emphasizing these issues going forward. So I don't see it as a huge problem, but it is something that we have to deal with.

In any case, we need to clarify what our projections mean. We're not providing information that we should. We have to fix it, and there's no reason not to. I think it's a minor change. I do not think that there will be much reaction by the markets or in the political sphere on this. I agree completely with Governor Kohn that, relative to the other problems that we are dealing with, this is very small potatoes; but I think it is good to show that we're still sticking to the basic things that we need to stick to and that, in this very complex environment, we can do the things that need to be done on communication strategy. That argues that we should be doing this and even doing it right now. Regarding the issues that you raised about going more to the full Monty on this kind of stuff, I do agree with Vice Chairman Geithner that now is not the time to do that. I should mention that I will be giving a speech in which I will be advocating going to an explicit inflation objective, but that's because I'm leaving the Board, and I have to say what I think. But there's an issue in terms of what this Committee should be doing, and I am sympathetic to Vice Chairman Geithner's view that this is not what we should be doing for the Committee right now. On the other hand, I'm a free individual now. In going back to be a civilian, I can say what I want.

In terms of my preferences, I really don't feel strongly. There are a lot of issues here. When I first thought about it, I preferred an option like 3 because I didn't want to give the impression that we're great at forecasting five years out, and I think that's really the strongest argument for it. But I do understand how we articulate that is a little tricky, and I think that's something that we have to think about. It might be clearer to do something along the lines that President Bullard discussed, as arguing it that way, but maybe we can do it in some other way. I think that's exactly why the staff can have some extra work for themselves to think about the best way to describe this, but I think something along the lines of providing information that we actually are putting in our projections right now, where we have a little section that says, "What are your long-term assumptions?" and we put them down. Somehow we need to convey that information to the public. Then the question is, What's the best way to do that? You can have all the wonderful arguments that we have over the statement each period. We'll get something like that going, and I think we'll figure it out. Thank you.

CHAIRMAN BERNANKE. Thank you, and thank you all. First, on the long-term projections, I think there's consensus that we should just go ahead and have a trial run. The staff should review the transcript and make gold out of straw there. We should consult with the subcommittee, and we should think about maybe even a couple of alternatives. Maybe we could try a couple of alternative ways of doing it in October. So let's go ahead and do something along those lines and keep thinking about how best to do it.

Let me first, as I usually do, try to summarize the discussion around the table, and I'll add some comments of my own. Beginning with the summary, the incoming data were stronger than expected, notably for consumer spending but for some other components as well. As a result, economic growth in the second quarter, though not robust, was likely positive, continuing the pattern of weak but positive growth since the fourth quarter of 2007. However, to the extent that strength in consumption was transitory or due primarily to fiscal stimulus, some of the growth in the second quarter may have been borrowed from the second half. Participants generally saw growth continuing at a slow pace the rest of the year and improving in 2009. There was, however, some divergence of views, with some expecting a longer period of slow growth.

Recent numbers on retail sales suggest that the consumer is holding up better than expected. Consumer finances may be better than feared, and the fiscal stimulus may already be having an effect. However, as many have noted, there are substantial drags on consumption going forward, including falling wealth and income, credit constraints, and the recent rise in energy prices. Sentiment has also fallen noticeably further. Weaker consumption may, thus, restrain growth later this year, particularly after the effect of the stimulus wanes. Labor markets continue to soften but at a relatively moderate pace. The peak in unemployment is projected to be between 5½ percent and 6 percent. That’s what I generally heard around the table. Prospects for housing continue weak, with falling prices, high inventories, and weak demand. Some saw a possible bottom forming but noted that the recovery of this sector is still some way off. As has been the case for a while, businesses are quite cautious, noting economic uncertainties and surging input costs, with one or two mentions of tighter credit, although that was not a dominant theme today. Real exports continue to grow and are partially offsetting weaker domestic demand, especially in the case of manufacturing.

Financial conditions have been mixed since the last meeting, although the improvements from March have largely been maintained and the risk of systemic crisis may have receded to some degree. Funding markets are generally doing better. The concerns about credit losses have led the stock prices of banks, including regional banks and investment banks, to fall sharply. Capital raising continues, though at less favorable terms and with perhaps declining availability. As the economy continues weak and housing contracts further, more credit losses for banks may well be in store, adding to financial market stress and reducing the availability of new credit. Progress in the financial markets is likely to be slow as the deleveraging process will take a while. Stock prices in general are also lower. Financial conditions in the housing market remain important downside risks to growth, with the spurt in oil prices adding to those risks. Uncertainties about the growth prospects are great. However, tail risks may have moderated somewhat.

Readings on core inflation have remained relatively moderate. However, the sharp rise in oil prices and some other commodity prices, in part reflecting flooding in the Midwest, is likely to lead to very high levels of headline inflation over the next few months. Gas and food prices have become perhaps the most important economic issue for consumers, and firms are feeling ever-increasing cost pressures. Moreover, inflation pressures are global. There are increasing reports of firms being able to pass through these costs, which could lead to an increase in core inflation. On the other hand, slack may restrain core inflation increases. Measures of longer-term inflation expectations have been up a bit on net since April, depending to some extent on the measure chosen. Nominal wage growth is still slowing. Participants debated how much comfort to take from slow wage growth, some arguing that, by the time wages reflected higher inflation expectations, it would be too late. Most saw inflation risks as now to the upside, with the primary concern being the possibility that inflation expectations could rise further as headline inflation rises and more costs are passed through. That’s my very, very quick summary. If anyone has any comments, I’d be happy to hear them.

If not, let me just say a couple of words on my own views here. This may come as a surprise to some of you, but I am not a fine-tuner. I think that the objective of the Federal Reserve ought to be to avoid a very bad outcome, and so my concerns are primarily with tail risks on both sides of our mandate. I think that the evidence of the last month or so provides a bit of reassurance, on both the real side and the financial side, that the tail risks on the growth side of the mandate have moderated somewhat. That being said, I think they remain and are still significant. In particular, as I mentioned in the summary, I am at this point still suspicious of the strength that we saw in the second quarter. If we look at the fundamentals for consumption—including wealth, income, employment, and energy prices—and look at the plunge in sentiment, which is at remarkably low levels, I think there's a very good chance that consumers will weaken going forward and bring the rest of the economy along with them. In addition, of course, housing remains extremely uncertain. We are at best some distance from stabilization in that market. Even when residential construction begins to stabilize, we'll still see continuing declines in house prices, which will affect consumer spending and, importantly, will affect financial markets as well as the value of mortgages.

With respect to financial markets, I agree certainly that the crisis atmosphere that we saw in March has receded markedly, but I do not yet rule out the possibility of a systemic event. We saw in the intermeeting period that we have considerable concerns about Lehman Brothers, for example. We watched with some concern the consummation of the Bank of America–Countrywide merger. We worried about a bank in the Midwest. Other regional banks are under various kinds of stress. We're seeing problems with the financial guarantors, with the mortgage insurers. So I think that those kinds of risk are still there, and we need to be very careful in observing them. Moreover, even if systemic risks have faded, we still have the eye-of-the-storm phenomenon—we may now be between the period of the write-downs of the subprime loans and the period in which the credit loss associated with the slowdown in the economy begins to hit in a big way and we see severe problems at banks, particularly contractions in credit extension.

So I'm not yet persuaded that the tail risks are gone. I think it would be very valuable to have some more data, some more observations, to see how the financial markets and the economy are proceeding. But I want to say that I do agree that the developments in financial markets and the surprisingly strong data in the second quarter should lead us to feel somewhat better. I think we should take a little credit for our various efforts to support both the financial system and the economy.

Now, what about tail risks on the other side—on inflation? The increase in oil prices that we've seen in the past six weeks is obviously very, very bad news. I think that the combination of the commodity price increases and what we're going to see as very ugly headline inflation numbers is beginning to generate a tail risk on that side of the mandate as well, and I am becoming concerned about that. Indeed, I think that it's now appropriate that we begin, as some of us already have, to move rhetorically toward acknowledging that risk and agreeing that it may be at the point where it even exceeds the risk that we see on the growth side, although I think we're very uncertain about that.

Now, the concern I have is the following, which is that there has been a lot of talk about policy action. I don't think that a 25 basis point or even a 50 basis point move, if it's not viewed as being the start of a continued increase, is going to do very much on the inflation side, frankly. We had a good test of that over the intermeeting period. Partly because of our rhetoric and for other reasons, the dollar strengthened. The two-year rate rose 50 or 60 basis points, and oil prices went up $25. I do not think that with a small change in our stance we can do anything about commodity prices, and frankly, it's commodity prices that you're hearing about from your Board members and from people you talk to. It's the real change in the relative price of those commodities that is painful and the real change in the terms of trade coming through the dollar which is painful, and I don't think we can do very much about those in the short term. Our objective, of course, as everyone has noted, is to prevent that from becoming a sustained and persistent source of inflation.

So the problem then is that a small amount of movement will not solve the problem. A small to moderate movement, however, might create some serious financial strains given the fragility of the system. I think what we need to do is to decide when we reach that tipping point. There will be a tipping point at which we're sufficiently confident that the system is stabilizing and that we can begin to turn in a serious way to the inflation concern. A partial one step, unless it signals a longer-term tightening program, could give us the worst of both worlds. We will just have to make the judgment about when we have reached the point of having to switch from our previous approach of supporting the economy and financial system to an approach that is aimed more at containing inflation. It's going to be a very difficult and delicate situation, but I want to express again my agreement with those of you who are worried about inflation and my belief that the time might be relatively soon. But it's going to be a very, very delicate decision and one that we have to make with great concern and consideration.

A little anticlimactically, I would like to say just a couple of words about the 1970s because they keep coming up and I do think that these comparisons are a bit misleading. First, in the current episode, commodity prices—particularly oil prices—are basically most or almost all the inflation that we're seeing. That was not the case in the '70s. In particular, inflation rose considerably before the first oil price shock in 1973. PCE inflation was 5 percent in 1970, which prompted the wage–price controls, of course, which is an episode we're all familiar with; and in 1972, before the oil shock, average hourly earnings were growing between 7 and 8 percent. There was already a serious inflation problem before the oil price shocks came. Hence, credibility was already damaged at the time of the oil price shocks. That is not the case here.

Second, the movement in wages and core inflation following the oil price shocks in the 1970s was very striking. From the time of the oil price shock right before the second quarter of

1973 until the first quarter of 1975, total inflation rose a little over 5 percentage points, reflecting the quadrupling of oil prices. During the same period, core inflation rose more than 6 percentage points. In other words, core inflation responded almost one for one to total inflation. Moreover, average hourly earnings rose more than 2 percentage points, and productivity and cost compensation rose 3½ percentage points in that year and a half. So there was a very strong sensitivity of expectations and pass-through to these commodity price shocks. Obviously, we've been seeing oil price increases since 2003, and they have not yet shown anything like that effect on core inflation or on wages.

The final observation I'd make about the 1970s is that we shouldn't forget that, even in that very bad situation with very poorly anchored inflation expectations, the slowing of the economy did do something to reduce inflation. In particular, core inflation fell 3½ percentage points during 1975 following the 1973–75 recession. So while we cannot do much about oil prices, I do think that there is some hope that weakness in the economy is going to provide some restraint on core inflation, which of course will generate a more stable total inflation rate if and when commodity prices stabilize. So I've been very all over the map here. I apologize. I tried to organize my thoughts in the meeting.

My bottom line is that I think the tail risks on the growth and financial side have moderated. I do think, however, that they remain significant. We cannot ignore them. I'm also becoming concerned about the inflation side, and I think our rhetoric, our statement, and our body language at this point need to reflect that concern. We need to begin to prepare ourselves to respond through policy to the inflation risk; but we need to pick our moment, and we cannot be halfhearted. When the time comes, we need to make that decision and move that way because a halfhearted approach is going to give us the worst of both worlds. It's going to give us financial stress without any benefits on inflation. So we have a very difficult problem here, and we are going to have to work together cooperatively to achieve what we want to achieve.

The last thing I'd like to say is on communications. Just talking about communications following this meeting, I'd like to advise everyone, including myself, to lean, not to lurch. That is, we are moving toward more concern about inflation, but we still have concerns about economic growth and financial markets. We should show that shift in emphasis as we talk to the public, but we should not give the impression that inflation is the entire story or that we have somehow decided that growth and financial problems are behind us, because they are not. So if we can convey that in a sufficiently subtle way, I think we will prepare the markets for the ultimate movements that we're going to have to make.

Again, I very much appreciate your insights and your attention today. We have a dinner at 7:30, and for that reason I think we should probably bring this to a close. We'll start tomorrow morning with Brian's presentation of the policy options. The statement is essentially the same as the Bluebook's. There won't be any surprises there. So we'll begin with that first thing in the morning. Thank you.

[Meeting recessed]

June 25, 2008—Morning Session

CHAIRMAN BERNANKE. Good morning, everybody.

PARTICIPANTS. Good morning.

CHAIRMAN BERNANKE. We have two major items this morning. We'll first complete the discussion of policy action and the statement; and in the second part of the meeting, we'll discuss supervision of investment banks and some related policy issues. Over lunch, if time permits, we'd like to hear Laricke Blanchard talk about congressional developments, and we'll have a chance to ask questions there as well. So without further ado, let me turn to Brian to introduce the policy discussion.

MR. MADIGAN.[4] Thank you, Mr. Chairman. I will begin by referring to the draft announcement language in table 1, included in the package labeled "Material for FOMC Briefing on Monetary Policy Alternatives." As Chairman Bernanke noted yesterday, this version is only slightly revised from the version discussed in the Bluebook. Rather than keep you in suspense, I will note now that the revision is simply to strike the phrase "near-term" from alternative B, paragraph 4.

Turning first to alternative A, the Committee would ease policy 25 basis points at this meeting and would issue a statement similar to the one published after the April FOMC meeting. The second paragraph would indicate that economic activity has remained weak in recent months. It would recognize that consumer spending appears to have firmed but would go on to mention other aspects of economic performance that remain weak. The paragraph on inflation would cite the recent further increase in energy prices but would also note the stability of core inflation. It would again express the Committee's expectation for inflation to moderate, partly reflecting a leveling-off of energy prices, but would acknowledge that uncertainty about the inflation outlook remains high. As in April, the final paragraph would be silent on the balance of risks and on the likely path of policy.

For most of you, your baseline outlook would seem to provide little support for selection of alternative A at this meeting. As was noted yesterday, most of you conditioned your projections on a path for policy that begins to tilt up either immediately or sometime in the next few quarters. With such a policy path, the central tendency of your projections points to a gradual pickup in economic growth and a fairly prompt drop in total inflation as energy and other commodity prices level out but only a gradual decline in core inflation, which reflects the moderate amount of economic slack that you foresee over the next few years. As was illustrated in one of

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

the optimal control simulations presented in the Bluebook, a case can be made for alternative A if you agree with the staff baseline outlook and favor aiming for 2 percent inflation over the longer term. One of the estimated policy rules presented in the Bluebook also suggests modest further easing, but again that prescription relies on the staff's forecast rather than on your generally stronger near-term outlook. But given the modal outlooks of most members of the Committee, any case for easing at this meeting would seem to be best motivated by persisting concern about the downside risks to growth that many of you again cited in your forecast submissions. The "recession" simulation in the Greenbook provided one plausible scenario for the realization of such risks and suggested that the funds rate might need to be lowered to 1½ percent.

Under alternative B, the Committee would leave the stance of policy unchanged at this meeting. The statement would note that economic activity continues to expand and, as in alternative A, would mention the firming of consumer spending. It would cite the same factors that could restrain economic growth that were referenced in April and would add the rise in energy prices to the list. The inflation paragraph would again convey the Committee's anticipation that inflation will moderate but would elide the explanation for that expectation and would reference high uncertainty about inflation prospects. The final paragraph would indicate that the downside risks to growth appear to have diminished somewhat and that the upside risks to inflation and inflation expectations have increased. As I noted previously, we have suggested that the phrase "near-term" be struck as the Committee's focus presumably is on longer-term inflation. The references to risks to both growth and inflation would be consistent with the concerns that you expressed in your forecast submissions. The statement proposed for alternative B seems generally in line with market expectations, and an announcement along these lines is unlikely to provoke much market reaction. By pointing to reduced risks to growth and increased risks to inflation while not explicitly stating that the inflation risks predominate, the Committee would likely be seen as suggesting that its next policy move could be toward firming but also that such a move probably was not imminent.

A policy approach along the lines of alternative B seems generally consistent with the projections that many of you provided for this round. Although most participants conditioned their projections on a steeper policy path than the one in the Greenbook, many also appeared to assume that the firming process would not commence until later this year or in 2009. A decision to stand pat at this meeting might be motivated importantly by your sense that the risks in both directions around your baseline projections are substantial. While staying your hand today might risk a further upcreep in inflation expectations, you might also be concerned that a policy firming now, given that financial markets are still fragile, would risk having outsized market effects with adverse implications for an economy that remains weak. As a result, you may see benefits to allowing more time for financial markets to recuperate and more time for information on the outlook to accumulate before taking policy action. Holding the funds rate at 2 percent at this meeting would be consistent with the

Committee's past behavior as captured by the estimated outcome-based rule presented in the Bluebook.

Under alternative C, the final column, the Committee would firm policy 25 basis points at this meeting. In the statement, the paragraph on real activity would be identical to that for alternative B. However, the third paragraph would provide the motivation for the action by emphasizing that overall inflation has been elevated, that energy prices have risen further, and that inflation expectations have risen further. No assessment of the balance of risks would be provided in the final paragraph, thus avoiding a suggestion that the firming signaled a sequence of further rate increases. Nonetheless, with market participants currently seeing only a small chance of a rate increase at this meeting, an announcement along the lines of alternative C would likely prompt a considerable jump in short- and intermediate-term market interest rates.

Although most of your forecasts appeared to assume that policy firming would begin later this year or early next year, some of you explicitly assumed an earlier start to policy tightening. Members might believe that firming at this meeting is warranted partly by evidence of some reduction in downside risks to growth. Recent spending data suggest that economic activity has a bit more forward momentum than previously perceived, reducing the odds on recession; the modest improvement in financial market conditions points to some reduction in downside risks; and the Federal Reserve's special liquidity facilities appear to have been successful in reducing the odds of negative tail events and severe adverse feedback loops. Thus members might see it as appropriate now to begin to reverse some of the Committee's past policy actions to the extent that those actions were seen as motivated by downside risks that have now diminished. Also, near-term firming might be motivated by the further increases in inflation pressures and risks resulting from the continued upward march of energy and some other commodity prices. Finally, with inflation expectations continuing to show some signs of moving up, a firming of policy at this time might be viewed as a timely shot across the bow that could be helpful in restraining such expectations.

I thought that it might be helpful to conclude by reviewing two exhibits from the medium-term strategies section of the Bluebook, starting with the optimal policy simulations that are reproduced in exhibit 2. The simulations underlying these exhibits are based on the FRB/US model after adjusting it to line up with the Greenbook forecast and extension. As usual, these simulations assume that you aim to minimize the sum of squared deviations of inflation from target, squared deviations of the unemployment rate from the NAIRU, and squared changes in the nominal funds rate. Two key points can be drawn from these simulations.

First, whether policy firming should begin sooner or later may depend partly on your longer-run inflation objective. As shown by the black line in the top right-hand panel, if your objective for the longer run is to get back to a 2 percent inflation rate, these simulations suggest that you can hold the funds rate steady or even ease slightly further before beginning to firm in 2010. This policy path produces a somewhat faster decline in the output gap and thus somewhat slower disinflation than in the Greenbook and extension. In contrast, the simulations shown in the left-hand column suggest that pursuit of a 1½ percent inflation objective would involve policy firming beginning quite soon. In general, the policy paths described by many of you in your forecast submissions seem to fall between these two scenarios, apparently reflecting your sense that aggregate demand growth could be a bit stronger and inflation pressures a bit more intense than projected by the staff as well as your dissatisfaction with a path for inflation that is as shallow as that for the scenario with a 2 percent inflation objective.

The second point underscored by these simulations is that, even though the near-term path for the unemployment rate is a bit lower than in April, reflecting the recent indications of somewhat greater strength in aggregate demand, the medium-term outlook involves larger and more persistent slack than foreseen in April under either inflation goal. Despite that greater slack, as shown in the bottom two panels, core inflation under both inflation objectives runs 0.1 to 0.3 percentage point higher over the next four years than in the April simulations. That, of course, is the fundamental nature of a negative supply shock: Policymakers are forced to accept some combination of greater economic slack and higher inflation during a period of transition to a lower output path and, presumably, to an unchanged long-run inflation rate. That same point was made in a Bluebook box and in a staff paper on this subject.

Turning to your final exhibit, I would like to note that, in response to the comments of some members at recent FOMC meetings, the r* exhibit in the Bluebook has been augmented to include two additional measures of the real federal funds rate. Line 11 in the table at the bottom shows a measure of the real federal funds rate that uses lagged headline inflation as a proxy for expected inflation. By contrast, our standard measure, shown on line 10, employs lagged core inflation as the proxy. Line 12 shows a measure based on the staff's projection of headline inflation. Both of these new measures, at minus 1.3 percent, are considerably lower than the current value of the standard measure, minus 0.2 percent.

I want to emphasize, first, that these additional measures should not be compared directly with the r* measures shown in lines 1 through 9 of the table because the values of those measures are in part a function of the proxy used for expected inflation. For example, the r* value that would be consistent with the Greenbook projection and the actual real funds rate based on the lagged four-quarter average of headline inflation is minus 0.7 percent. Moreover, even if we redefined the Greenbook-consistent measure of r* to use lagged headline inflation, the implied 0.6 percentage point gap between the actual and the estimated equilibrium real rates would not necessarily imply that you should quickly raise the nominal funds rate by more than ½ percentage point. If, like the staff, you think it likely that headline inflation will moderate substantially later this year, then it follows that a gradual firming of policy in nominal terms would be consistent with a substantial rise in the real funds rate on this measure over time. Indeed, in the staff's view, the average value of the real federal funds rate over the next few years on any measure is a bit above the corresponding value of r*, and consequently the trajectory of the real funds rate on any measure would be consistent with protracted slack and declining inflation over the next several years. Of course, you may not agree with the staff about underlying trends for prices and real activity and, hence, about the value of r*. Even if you do agree, you may be dissatisfied with the projected trajectories for key variables such as output, employment, and inflation. Such considerations illustrate why no estimate of r* can be a complete guide to policy. That completes my prepared remarks.

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

MR. LACKER. Thanks, Brian, for including these two new lines of the real federal funds rate. As I remarked yesterday, one use of the figures is to look back and judge the degree of accommodation relative to other historical episodes. My understanding is that the Greenbook forecast of headline inflation four quarters ahead is higher now than it was in 2004, when the black line in your exhibit 3 last hit its lowest point. My understanding is that, if you drew that black line using the equivalent of line 12, the Greenbook's forecast for overall inflation, the trough in 2004 would lie around zero, and we would now be at minus 1.3.

MR. MADIGAN. Unfortunately, President Lacker, I haven't made that computation, so I can't confirm that.

MR. LACKER. Okay. Just a comment then.

CHAIRMAN BERNANKE. Governor Mishkin.

MR. MISHKIN. Just a quick question: When you do this based on the Greenbook projection for headline inflation, how far forward are you going with headline inflation?

MR. MADIGAN. Well, in any given quarter, it's four quarters ahead.

MR. MISHKIN. Four quarters ahead.

MR. MADIGAN. Yes.

CHAIRMAN BERNANKE. Any other questions?

VICE CHAIRMAN GEITHNER. May I?

CHAIRMAN BERNANKE. Vice Chairman.

VICE CHAIRMAN GEITHNER. Brian, it might be helpful if you would circulate your remarks about the new exhibit 3 and its implications after the meeting. That was very helpful. But I just want to clarify one thing. Could you just repeat what you said—looking forward under any of these basic measures, where do you expect the real fed funds rate to be in relation to r*?

MR. MADIGAN. The actual real federal funds rate is above r* under any measures—so in other words, our outlook is the same. These are just different yardsticks for assessing our basic view of the stance of policy.

CHAIRMAN BERNANKE. If there are no further questions, why don't we begin our go-round? President Evans.

MR. EVANS. Thank you, Mr. Chairman. I'd like to start by saying that I agree with your comments yesterday about how we should proceed with the Committee approach and think very collaboratively about the policies and delicate strategies that we're facing. Although we disagree on a number of the elements of the outlook, I think that bringing everything together is a very important part of this.

I have fully endorsed funds rate cuts that we have taken so far in large part as insurance against tail risks to growth. I think that policy last summer was much too restrictive given what we were facing and that, along the way, a lot of these cuts have been motivated by tail risks to growth. The funds rate at 2 percent is pretty ample insurance to my mind—more so given the improvement in the outlook for growth that we've seen as second-quarter growth has been marked up so much and even more so given the inflation risks that we're facing, the risks to inflation expectations, and the potentially very low real interest rates that we might be looking at, depending on the measure. If we had the opportunity to recalibrate things a bit, I probably would prefer something more like a 2½ percent fed funds rate to be positioned against the different risks that we're facing, but I understand that we're at 2 percent, and no change seems like the right move for today.

I do have a few concerns about the way we're thinking about this, more in the line of risks. One is that, as we take insurance against tail risk, we're positioning the funds rate against an event that we think is not the most likely and is negative compared with where we are. Unless and until that event happens, policy is somewhat accommodative because it hasn't happened, and we're thinking that it is closer to where it ought to be if that should happen. Unless you think that we haven't taken out insurance, then I think that we have more accommodation than we might like.

The second concern is whether it is possible to be more precise about what we mean by this tail risk. I mean, it's really a catch-all. Nobody is very comfortable with all of this. What are the markers that we could look at for improvement if we could quantify this somehow? Is it that financial markets should be functioning better? I think surely that is the case. Is there a way that we could describe that? I'm sure we'll disagree on many elements of this. Labor market improvement—we should expect that, if the labor market does better than we were thinking, then that would tend to bolster consumption spending a bit better in the face of all the shocks that we're looking at. So the extent to which the labor market doesn't continue to deteriorate, at least in line with some of the recession scenarios and the tail risk scenarios that we were thinking about, is a potential marker.

As we keep pushing out our expectation that the economy is going to weaken—and we've done this a number of times—and if we're looking at the third quarter being revised up—and I agree that we're facing a lot of risks there—but if we start marking that one up, I think that's a marker that we have to be concerned about. Obviously, if oil prices and commodity prices were to decline and free up purchasing power for consumers, that would help out, too. So these are just some of the things that come to mind. Is there a way to think about the details a little better, with a bit less of a SWAG?

Another risk relates to financial markets. Here I'm thinking about the really influential work of yours, in 1983, on nonmonetary influences on the Great Depression. A lot of the actions that we have taken are defenses against those types of issues, right? In the 1930s, when the economy was doing very badly and banks were failing—I'm telling this to you, and you've described it to everyone—then the knock-on effect was that the banks weren't there anymore and important resources for evaluating credit were lost, and so it was more expensive and very difficult to do. We have some of that going on now, right? We've moved from the banks making mortgages and holding them to the "originate to distribute" model. Those resources have been dispersed, and now that securitization market is closed. I heard that very clearly yesterday. Those important resources aren't there to originate mortgages, so if we get to the point that buyers are willing to purchase these houses, that could be a concern.

What happens if there's a true impairment to the financial capital stock, and real resources aren't there anymore to help out with this? We're probably looking at a reallocation of resources from that sector of the financial market either back to banks or to somewhere else. But as we see those resources reallocated and as we think about unemployment being higher, we can talk ourselves into thinking that a lot of slack is in the economy when, in fact, there may not be so much slack. At some point it may be slack, and at other times it won't be, until those resources are reallocated most efficiently. I think this could reduce potential growth rates and have structural elements to it, not just cyclical elements. So there's not a slam-dunk for this. There is just a risk that an element of that is playing out throughout this, and other factors are superimposed on that.

But it's something that I worry about. In a robust type of policy development, I think we should be considering things like that. It's just the case that, in the current situation that we're looking at, there might be a limited role for monetary policy to repair real capital stocks.

Another concern is that anytime we've engaged in substantial risk-management policies, there has always been difficulty in taking them back. That's part of the delicate strategy that you are referring to, I think. That's how I heard it. So we have to be very careful. There's a lot of art to this clearly, but it would be good if we could offer a few more bright lines about how we'll approach that. Still, I certainly agree. I think we need to seek consensus. It's our role to raise these issues and then come to the best judgment. So I'm quite comfortable with no change today. I'm quite comfortable with the language in alternative B, although in the third paragraph we say, "However, in light of the continued increases in the prices of energy," and I think it would be better if we didn't say "continued." I think it's enough to say "the increases." In part, I don't know if this is a marker that, if prices level out, we'd still be comfortable with the inflation risk. I think that there will be a lagged effect of all the very large increases that we've seen for oil as they work their way through. If prices just level out, we still have risks to inflation expectations. So I prefer taking that out. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you.

MR. KOHN. A two-hander, Mr. Chairman.

CHAIRMAN BERNANKE. Governor Kohn.

MR. KOHN. President Evans, so you are arguing that the re-intermediation process is going to raise the NAIRU. I thought that the NAIRU depended on the structure of the labor markets, job matching, and stuff like that, so I didn't quite understand the connection.

MR. EVANS. I'm alluding, without understanding or working out, to a sectoral-shifts model of unemployment and how that search process could be more difficult. You're just taking resources that over some period took a while to allocate to the financial sector and now they have to be reallocated somewhere else.

CHAIRMAN BERNANKE. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. Recognizing, as I do, where we're coming from and its dangers, I think more-recent data suggest that the downside risks to growth have diminished, and in my judgment the current stance of policy is much more accommodative than necessary to address these risks. I continue to believe that the two most recent policy actions of this Committee were more than sufficient, and we really need to think about reversing them sooner rather than later. Inflation risks have risen, and we have seen erosion in longer-term inflation expectations. As I noted in my previous remarks on the outlook, if we do not begin to remove policy accommodation soon, I think we risk having to tighten policy more aggressively in the future to reestablish our credibility.

A couple of things. It struck me in looking at some of the major economies besides the United States—the European Union, Japan, and China—if you look at the real interest rates, they're low. I mean, they are 1 percent or less or negative. So this is a lot of stimulus coming into the world economy. And to make my point again, I don't think you can have a sustained recovery with a sustained inflationary environment, which we're in danger of encountering if we continue on this path.

Over the past several weeks, markets have significantly altered their expected funds rate path to remove policy accommodation, and therefore, I don't know that doing something today would be that big a surprise. The current funds rate path built into the market rates is closer to what

I believe is desirable to maintain price stability over the long run, but I would prefer moving somewhat faster—3 percent by the end of this year and perhaps 4¼ percent by the end of ’09. Thus, in my view, we should begin the process of removing monetary policy accommodation by increasing the fed funds rate target by 25 basis points at this meeting. I think this action would perhaps be somewhat unexpected, and I recognize that there is some risk that markets would react by moving the funds rate path up more dramatically than some might desire. However, taking this action would move us beyond merely talking about inflationary risk and would help us contain inflation expectations by reaffirming our commitment to maintaining price stability. I think it would quickly have a positive effect on the economy as these expectations begin to shift. Now, assuming that’s not the majority view today, I would then encourage us to set the stage in our language for stronger actions coming in the future. That is an important issue especially, as you mentioned yesterday, in terms of remarks that we might make following this meeting, in speeches and so forth.

Finally, let me just say that I think policy is currently accommodative, perhaps very accommodative. The insurance policy taken out earlier this year to guard against the tail risk of spillovers of the financial distress to activity is less necessary, perhaps far less necessary, and it is potentially even harmful to the efforts of maintaining price stability. Therefore, I encourage action sooner rather than later. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. The growth outlook has improved over the last two months, but the inflation picture has not. If anything, it has deteriorated. I think it’s clear, as President Hoenig argued, that we should be tightening policy soon. The extent to which we brought the funds rate down was predicated on downside risks and the notion that we could reverse course rapidly. As downside risks now look much less likely, I just don't see how an argument that 2 percent was the appropriate funds rate in April does not also imply that a higher funds rate would be appropriate now. Taking back some of that stimulus at this meeting, however, is probably inconsistent with the commitment implied by the Committee's traditional interest rate smoothing behavior. So I'm willing to stand pat today with the funds rate.

The timing of such moves is going to present us with some trouble going forward, though. Even if we avoid outright recession, as now seems probable, the unemployment rate is likely to keep rising for a time. But waiting isn't going to make it easier for us, in any event, because there's a likelihood of the fourth quarter's showing a slowdown when the stimulus wears off. But inflation is going to increase in the near term as well. At least that seems likely, and holding rates down while that happens and while inflation expectations are already fairly elevated seems awfully risky to me.

I can understand the need for some conviction when we raise rates. When we began cutting rates aggressively in January, there were some significant uncertainties in the inflation outlook, though. I hope we don't set any higher a threshold of conviction for rate increases than we set for rate cuts. Looking back at 2003-04, and this is strictly in hindsight, one can argue that we erred by waiting too long to reverse course, and I've heard you yourself make that argument, Mr. Chairman. So the logic of risk management works in both directions. I think we need to keep that in mind.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I favor alternative B with the proposed wording. Given the forecast and the risks around it, our next move on the funds rate is likely to be up, and the question is when. Assuming that the data on growth and inflation come in roughly as I and the Greenbook expect, I would envision beginning to remove policy accommodation toward the end of this year, similar to the assumption in the Greenbook. As I mentioned, I'm not very confident that the outlook for growth and employment has improved as much as the Greenbook assumes. I'm concerned that households and firms are in a python squeeze of an intensifying credit crunch and a continuing decline in housing wealth as well as pressures from surging food and energy prices. I think the economy has shown resilience so far, and that's reassuring, but I don't think it's assured for the future. The aggressive policy actions that we have put in place since January are actually working to cushion the blow, and that's part of the reason that we haven't seen a greater unraveling so far.

I mentioned yesterday that, with respect to inflation, the behavior of both core inflation and wages thus far makes me optimistic that headline inflation will come down if commodity prices finally level off. But I think there's no doubt that the risks with respect to inflation are not symmetrical at this point, and they have definitely increased. I still see inflation expectations as reasonably well anchored, but there's no doubt that a wage–price spiral could develop, and dealing with it would be a very difficult and very painful problem for the Committee. So while I feel that we are essentially credible now, I wouldn't want to take absolutely for granted that this is something that we can count on going forward.

At this point, the federal funds rate remains well below the recommendations of most versions of the Taylor rule. I have viewed this as appropriate, not largely as insurance against downside risk but simply in refection of the unusually severe pressures from collapsing wealth and tight credit and financial constraints. But it does seem to me to be appropriate going forward to at least take out some insurance against the development of a wage–price spiral mentality, and that could take the form of gradually removing that discrepancy from what, for example, a Taylor rule recommends. But before we begin to do that, it does seem to me that we should wait to get a somewhat clearer picture of where the real side is going.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. In my view the economy is evolving in a way that suggests that we need to take back sooner rather than later some of the insurance we put in place against downside tail risk. I base this view on several points. First, economic activity remains weak. I don't dispute that. The data since our last meeting have been better than expected. The Greenbook forecasts as well as most private-sector forecasts have been revised up. So although downside risks remain, the tail risk of a significant recession-like outcome for the economy, though it has not vanished, has certainly diminished. Second, financial market indicators suggest that market functioning, though not back to normal, has certainly improved somewhat in recent months. Demand for Fed liquidity from the primary dealers has fallen. Primary credit borrowing generally is down. Now, although we may wish to keep our liquidity facilities for now as a backstop, the extra accommodation that we have built into monetary policy may no longer be needed or even appropriate at this point. The real economy and financial functioning have improved since our last meeting, but the inflation outlook has worsened, as we have been hearing. Headline inflation is up. Expectations of various kinds are elevated. Upside risk to core inflation has increased, as the Greenbook has said. As I said yesterday, these upside risks stem not only from the potential pass-through of energy prices but also, in my view, from the fact that we're running a very accommodative policy despite rising inflation.

In fact, I believe that policy has actually become more accommodative since the meeting at the end of April. First, the nominal funds rate has been at a constant level, but expectations of inflation have risen. So, in fact, the real funds rate has actually declined since our last meeting as inflation has risen. Second, real rates of interest more broadly have been gradually drifting up since late March or early April. The TIPS rates, the real interest rates, have been drifting up by, depending on which term you look at, anywhere from 25 basis points to 35 basis points. So as the real rates on risk-free securities have risen, which may be appropriate given the fact that prospects for the real economy have improved modestly, the real funds rate has been declining. As a consequence, whatever you think about the level of the fed funds rate, we have become more accommodative since the last meeting.

As I've argued before in this Committee, optimal monetary policy in a broad class of models suggests that you get Taylor-rule-like rules but that the funds rate follows the real interest rate as it moves around. Optimal policy calls for following the real rates. I argued that was the case and appropriate as real rates fell in the context of a weakening economy. It was important that policy match those declines in the real rates, which I think it did. It's a coherent policy, but it also means that as real rates begin to rise, as we have been seeing, policy needs to adjust to those real rates rising. Now, of course, a lot of judgment is required in this type of policy. There are smoothing issues. Real rates could be quite volatile. There's debate about which real rate you want to be looking at. I understand that. But I don't think there's any question that the objective should be to match those movements in the real rates, and we should be thinking about it in those terms.

Long-term inflation expectations have been volatile but have moved within a reasonably defined range over the last period, and I'm comforted somewhat by that. But as I have said, I believe that inflation expectations are fragile. At the very least, the anchor is dragging, and if we continue to maintain a real funds rate well below zero with rising inflation well above our goal, I do not think we can continue to assume and trust that expectations will remain well anchored.

We've done a good job with our words so far, but with the shift from downside risk to growth to upside risk to inflation, we need to take action to ensure that price stability remains a credible objective of this Committee. If the economy and financial markets continue to evolve as they have over the last couple of months, that time may be soon. We must take back some of the insurance we put on. Not doing so soon risks having to respond more aggressively later on, which I believe will be much more difficult for the Committee to do. In fact, smaller moves sooner will help with our credibility in the marketplace and will help anchor those expectations as we wait for more data and for the economy to strengthen.

In this regard, I think we are fortunate that market participants reacted to the incoming data by appreciably tightening their policy expectations. Thus, a move to raise rates is unlikely to catch them off guard. Moreover, I don't think that we should disabuse them of such policy expectations. Some might argue that an increase in policy expectations is a negative development. I would disagree. I think that it reflects rising expectations of a somewhat stronger economy and concerns about inflation. As the Chairman said, we should resist any erosion, any rise in longer-term inflation expectations. Now, as I said, the timing of such a move is a judgment call, and I expect that my views will differ from those of some of my colleagues, particularly since I had my fed funds rate path rising to 2¾ percent by the end of '08. So let me turn to language.

In the rationale in paragraph 2, I have only one suggestion. I think that we should acknowledge that the functioning of financial markets, while not back to normal, has improved. So instead of saying "financial markets remain under considerable stress," which we have said for some time, perhaps it might be easy to say just that the financial markets remain under stress, leaving out "considerable." That acknowledges the fact that there's some improvement but that stress is still there. Finally, in paragraph 4, I am pleased that the revisions make more explicit that the upside risks to inflation and inflation expectations have increased and that the downside risks to growth remain but are diminished. I was going to suggest that we strike "near-term," but Brian beat me to the punch there. So I approve of that change. I think that's very good. In alternative B, I would prefer that we add some of the language from the Chairman's recent speech to paragraph 4. I think it would be a stronger message that the Committee will take actions to ensure that inflation expectations do not become unhinged, and it would also convey that both parts of our dual mandate, price stability and economic growth, are at risk should inflation expectations become unhinged. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I support the action and language of alternative B; Brian's striking of "near-term" is fine with me. This is a tough situation, as we all remarked yesterday. Commodity prices are at the center of the problem that we find ourselves in. In my view, we didn't cause the rise in commodity prices. We may have contributed a little around the edges, but whatever we contributed was a necessary byproduct of what we needed to do to cope with what was happening to the U.S. economy, and we can't reverse the rise in relative prices without tremendous cost to the U.S. economy. Or even the rise in headline inflation, we couldn't undo that without putting a huge amount of slack in the economy to force down wages, sticky prices, et cetera, and that would not be appropriate.

I think the classic response that we've all been talking about is to take a temporary increase in inflation and in unemployment that facilitates the relative price changes that need to happen, concentrate on second-round effects, and make sure those increases are temporary. I think that's inadvertently what we've fallen into here. Given the housing and financial shocks, the 2 percent fed funds rate of alternative B is consistent for now with continuing along the path of the temporary increases in inflation and unemployment. Unlike many of you, I don't see the current rate as extraordinarily accommodative, given what else has happened in financial markets. There is no insurance in the staff forecast, right? The Greenbook forecast has zero insurance in it. My own forecast was a little stronger than the Greenbook's. I think all of ours were a little stronger than the Greenbook's, but even if I marked up r* by ½ point or 1 point, that's not a huge amount of insurance in the circumstances that we're facing. I note that no one sitting around this table predicted a decline in the unemployment rate over the balance of the year; so everybody has 5½ percent or higher unemployment rates predicted by the end of the year. The staff thinks that the current 5½ percent is a little too high. So they are expecting the unemployment rate to come down in the next month or two. Given this, we're all expecting the unemployment rate to rise over the balance of the year. I would think, given the lags in policy, that if you thought policy was hugely accommodative, you'd see some decline in the unemployment rate over the next six, seven, or eight months. I think our own forecasts suggest that some insurance might be here, but not the amount that I'm hearing some of you talk about. I don't see the consistency there.

My own view is that there's probably a little insurance in it, and it's appropriate for now. I agree that the next move in interest rates is more likely to be up than down. I assumed, like President Yellen, that it would be at the end of this year or at the beginning of next year. The rising unemployment that we all expect should help damp inflation and inflation expectations and make it very hard to pass through all these cost increases that we're hearing from businesses that they want to pass through and certainly make it hard for wages and cost pressures to rise.

So I agree with everyone else that the weight in the two tails has shifted. There's less weight in the downside risk tail for output and more weight in the upside risk tail for inflation. The statement does a very nice job of saying that explicitly, and I think that we just need to await incoming data and information about inflation expectations, costs, and whatnot to see when the appropriate time to move will be. Because I don't think there's a tremendous amount of insurance in there, I think we can afford to be a little patient and data dependent here. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Pianalto. Oh sorry, President Plosser.

MR. PLOSSER. Governor Kohn, a question, or a comment, about interest rates. A lot of our discussion has been centered on how accommodative we think policy is and how we interpret it in the current environment. If I want to quantify the magnitude a bit, at least the way I think about it, even if I believe that the economy is weak enough so that the appropriate equilibrium real rate of interest is zero, we have inflation running somewhere north of 3 percent. That would suggest a nominal funds rate of about 3 percent as opposed to 2 percent. So roughly speaking, I would interpret that to say that we have roughly 100 basis points of extra accommodation built into our fed funds rate relative to what—and that's assuming an equilibrium real rate of zero, which might even be low. So if I'm thinking about it that way, could you clarify how we should quantify it in some way?

MR. KOHN. It's very difficult. We don't know what inflation expectations are. We're all using proxies, as came forth very strongly at the Cape Cod conference where we both were, President Plosser. We don't even understand very well how expectations are formed, and I think what we're looking for is how people perceive the cost of capital to finance purchases. So we're wondering whether this low interest rate is causing them to bring purchases forward from the future to the present to induce them to buy things, capital goods, right? That's the interest rate we're really looking at—the perceived cost of credit to folks—and I'm not sure that subtracting any rate of inflation is the way to get that. Obviously, the cost of credit for housing is perceived as hugely high right now. The cost of credit for automobiles is perceived as hugely high for reasons that perhaps aren't related to monetary policy. I don't think we see a surge in purchases of capital equipment that would suggest that businesses perceive the cost of credit to be very negative. So I think, because we don't understand inflation expectations and can't measure them, you have to look for a lot of different things around the edges to confirm what people perceive the real rate to be. I just don't see a lot of information that suggests that people perceive the real rate to be very negative and that it is influencing how they manage their purchases of goods and services over time.

CHAIRMAN BERNANKE. Thank you. I guess just to say it more simply, all the rates that have determined behavior—for example, mortgage rates, auto rates, or corporate bond rates—are higher than a year ago. Now, unless there has been a major change in long-term inflation expectations, which the TIPS data don't suggest, there don't seem to be indications, as far as interest rates that are relevant to people's spending decisions, that there has been a significant reduction. Someone else had a comment. Governor Kroszner.

MR. KROSZNER. It's directly on this point. It seems that in the situation we're in, with very elevated spreads in LIBOR, there are almost no contracts in the real markets that are related directly to fed funds. It's usually through three-month LIBOR, and we know that the spread is now roughly 70 or 75 basis points higher than it used to be. It used to be about 10 basis points, and now it's around 80. For me that's one rough proxy in how I think about this—that the way in which our actions are being translated into market prices is somewhat different from the way it was when the spreads were lower.

CHAIRMAN BERNANKE. President Lacker will back President Plosser up though.

VICE CHAIRMAN GEITHNER. This is like pro wrestling. [Laughter]

MR. LACKER. Just a brief observation. Spreads always rise in recessions. We always lower real rates in recessions. So to say that the fact that spreads have risen by itself doesn't make this an exceptional circumstance.

CHAIRMAN BERNANKE. The magnitude is somewhat greater, though.

MR. LACKER. For some; not for others. Corporate bond spreads aren't as high.

CHAIRMAN BERNANKE. President Pianalto, we apologize.

MR. PLOSSER. I apologize.

MS. PIANALTO. Thank you, Mr. Chairman. I support keeping the fed funds rate target at its current level and the language in alternative B. I see some hopeful signs that stress in financial markets has diminished as has the threat of a sharp recession. Despite these recent signs, I expect that the growth momentum in the economy will build only slowly. Moreover, I continue to worry that the residential real estate market could deteriorate even more than I had put in my baseline projection. Nevertheless, I am somewhat more comfortable with the prospects for economic activity than I was in April.

At the same time, I can't easily dismiss the recent behavior of energy and some other commodity prices. I found the Bluebook's supplemental analysis on oil prices, inflation expectations, and monetary policy to be very useful in thinking about the dilemma that we face. The fact that oil prices have risen so sharply and have been so persistent highlights the risks surrounding the downward projection that I have for core inflation. Without some evidence of less inflationary pressure I don't believe that the fed funds rate can be kept at its current level for very long. But while I do believe that the next policy action will be a rate hike, the potential for the recovery to sputter makes me cautious about embarking on an upward trajectory for the fed funds rate just yet. I believe that the language in alternative B conveys the right sense of direction for the fed funds rate path, with the right amount of caution. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. U.S. economic data have been stronger than expected during the intermeeting period. The earlier, very aggressive moves in January and March taken by the FOMC were viewed in part as insurance against the possibility of a very serious downturn brought on by financial market turmoil. That very serious downturn has not materialized. Tail risk has diminished significantly. This means that this Committee has put too much economic stimulus on the table and must think about ways to remove it going forward. Failure to do so will create a significant inflation problem on top of problems in housing and financial markets. Slack might be helpful, as mentioned by Governor Kohn, but those effects are small compared with expectations effects. I think it is too early to tighten at this meeting. Therefore, I am supporting alternative B with the language proposed by President Plosser. But the Committee has to think carefully about how and when to embark on a path for interest rates that will set us up to achieve price stability in a reasonable time frame. My sense is that this will require more-aggressive tightening of policy than currently envisioned in staff simulations.

Financial market problems have been described here as a slow burn, and I think that may well be an apt description. Many firms in this sector took on too much risk and, in retrospect, had poor business models. I expect that this will take a long time to unwind. Despite this, the systemic risk component of the situation has diminished considerably. Systemic risk is in part a function of the degree of surprise in the failure of a financial institution that was perceived to be in good health. Surely by now few market participants would be surprised to encounter the failure of certain institutions. Failures, should they occur, can be handled in an orderly way.

Certain investors would lose out in such an event, to be sure, but my sense is that the panic element that would be associated with systemic risk would not be present. I believe that we should start to downweight systemic risk concerns substantially going forward because it is no longer credible to say that market participants are surprised to learn of problems at certain financial institutions. Thank you.

CHAIRMAN BERNANKE. Thank you. President Stern.

MR. STERN. Thank you, Mr. Chairman. Well, first of all, I believe that policy is well positioned for now from a couple of perspectives. For the next quarter or two, I think there is still some potential for significant disappointment in terms of economic growth—but only for a quarter or two. Beyond that, a pickup in real activity appears pretty likely. That is, based on what I know now, further reductions in the federal funds rate shouldn't be required for the economy to improve next year and beyond, and we do have the liquidity facilities available should strains in financial markets threaten to intensify. Policy is also well positioned for now from a second perspective—namely, that the fed funds futures curves have priced in an increase in the funds rate beginning in the late summer or the fall. I think that this is appropriate because I think we are going to find that we will want to and have to start moving to contain inflation expectations. Precisely when to move may turn out to be a difficult call, but I would like to see futures priced to anticipate such action on our part—as indeed they are at the moment.

That brings me to the recommendation and the language. I think the strategy expressed in the Bluebook associated with alternative B is fine for now, and so I favor alternative B. The language in alternative B is okay as well, although I would endorse President Plosser's recommendation to drop "considerable" from the description of financial strains. The other thing I would point out is that the Bluebook says that, at least in the staff's judgment, the language associated with B might push back expectations for the onset of policy tightening. I am reading from page 33. It is not that I am anxious to tighten necessarily as early as possible, but I would rather not push those expectations back at this point. So if that assessment is correct, it might be advisable to find a way to address that issue. I don’t feel all that strongly about it, but I think we could, if we wanted, take the sentence in paragraph 4 that’s in red, drop three words—the first word “although,” a word at the end of the phrase “remain,” and then “they.” So you would just say, “Downside risks to growth appear to have diminished somewhat,” which I think is true. It doesn’t suggest that we are sanguine about growth, although I suppose it could be read that way. But I am a little concerned about the way we might change expectations based on the Bluebook commentary.

CHAIRMAN BERNANKE. You have your Strunk and White style manual with you, I can see. [Laughter] Thank you, President Stern. President Rosengren.

MR. ROSENGREN. I support alternative B. At this time, there are significant downside risks to the economy and financial markets, as the collateral damage from the housing problems works through the economy and financial institutions. At the same time, continued increases in oil and food prices raise the risk that some part of these supply shocks will be incorporated into inflation expectations. In the absence of more-compelling evidence about which of these two risks will dominate, I would favor remaining on hold at this meeting. I hope that the economy picks up in the second half of this year and that the financial markets stabilize so policy can become less accommodative, but it is not clear that this will be the outcome. While the inflation outlook has been affected by continued energy shocks, the future path of oil prices remains uncertain, and recent history has many instances in which oil shocks are short-lived and have little effect on longer-run inflation expectations. Until we have more clarity on the path of the economy and inflation, policy should remain on hold, and our language should be consistent with that.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I also prefer the fed funds rate recommendation and language of alternative B. It captures the delicacy—I think that word was used yesterday—of the current tradeoffs and leans fairly heavily rhetorically against inflation and inflation expectations. I note that inflation and inflation expectations are mentioned in both paragraphs 3 and 4 using the language, "Uncertainty . . . remains high" and "risks . . . have increased." I think this constitutes considerable stress on the seriousness of our commitment to address inflation and expectations, and it is a complete statement and will serve to condition the market. As Brian said, it suggests that firming later in the year could occur, and I believe that is appropriate. I would like to give the medicine that we have applied to resolve the situation and the financial markets a little more time to work. I am in accord with Governor Kohn's thinking of stimulus or accommodation in terms of the cost of borrowing to real borrowers—individuals and businesses—and, therefore, we really have not seen a proportionate improvement in the cost of capital, notwithstanding such a strong reduction in the fed funds rate.

So as of now, I would expect to support a reversal a little later in the year. I also think there is enough ambiguity currently that giving the situation a little more time to clarify would be helpful. Core inflation has not risen dramatically, whereas headline has, and it is headline that the public is reacting to. Measures of expectations, such as they are, seem to suggest that short-term expectations have risen more than long-term, so there really hasn't been a clear breakout of long term. It may be true that it would be too late if we saw that breakout, but I think we can afford to wait for a greater preponderance of evidence to accumulate over the next few weeks before considering a reversal. So I support, as I said, alternative B and the language of alternative B.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, I listened very carefully to what was said around the table yesterday, and I especially listened very carefully to you. You made a very good and interesting point about the differences from the 1970s. I would add that there are significant differences from the 1970s. We didn't have the Internet in the 1970s. We were not globalized in the 1970s. If you were selling oil into the market, you sold to three buyers—the ten countries known as Western Europe, the United States, and Japan—whereas now you have several billion people more to sell to. Another difference is that the transmission mechanisms were not as fluid, which gets me to a question, really, with which I am wrestling constantly. Before, a cyclical slowdown would lead to a lessening in price pressures. I am not so sure that's correct if we are talking about a cyclical slowdown in the United States. We already have wages going up significantly in the largest factory in the world, which is China, where we source a great deal. So there is wage–price inflation, but there are enormous demand-pull forces that are quite different from what we had before.

I am a little concerned—and I say this with not only respect but humility at having less training—Governor Kohn, when you say that we might tolerate a "temporary increase in inflation." If you opened the *New York Times* this morning, you would have seen that Dow Chemical raised prices 25 percent after just raising them 20 percent—in one month. By the way, I notice that these little bottles of water have gotten smaller—this will be a Visine bottle at the next meeting. [Laughter] What goes into this—the plastic? Here's the point. Many micros make a macro. Micro business operators are not going to tolerate temporary increases in inflation. They are going to act on them. I worry about that enormously, particularly given the fact that they are globalized and they sell to a globalized market. We can be victimized by that. Now, I may have over-analogized yesterday. You teased me after the meeting. Although I like Janet's analogy of the python—one of my tutors at St. John's had a python named Julius Squeezer, by the way. [Laughter] Just to kill that reference, I feel a bit squeezed here at the table.

You mentioned yesterday, Mr. Chairman, three things that caught my ear. Obviously, we need to strive to avoid bad outcomes. Second, we need to decide when we're at the tipping point. We need to pick our moment, as you said. Third, you also said that we need to lean and not lurch. I listened very carefully just now to President Evans, who was most eloquent in his presentation. I happen to agree with him in terms of where I think we should be.

Yesterday I said I thought there were three ways to deal with our current predicament now that the tail risks have shifted. One is to hope it will cure itself. I don't believe that is going to happen because of the way micro operators operate. The second is to treat it rhetorically, and I think that the language in alternative B is quite good, if that is the way you wish to go. But I don't think it is going to get any easier, as was mentioned earlier at this table. I am not sure that things will get easier by August. We then get into an election season, which I think still conditions somewhat our thinking. I think it is important to take a shot across the bow. I think we have to put some substance behind our words. As I said before, and I know you know, I like to be liked. I don't like to be alone. But I am going to vote for alternative C. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Let me say just a few things. First, to state the obvious—there are risks on all sides of these decisions. Second, I will try to wade into the debate briefly on this accommodation point. My own view is that policy is accommodative—the degree of that is why we are having this debate. I think about our degree of accommodation as a function both of our target fed funds rate and what the financial markets do with it, by which I don't mean just what the expected fed funds targets are out in the future but the transmission mechanism. The degree of accommodation, as we think about our decision now and in the next several months, will depend more on financial market developments than, frankly, the decisions that we end up making on the target; and it is very hard for us to judge the direction of these markets. As much as we have talked about tail risks on the financial market side and the real economy side being diminished, I think all of us would say that there is a real chance that this will be a long, hot summer. It is hard to know what the credit channels are going to do with our target federal funds rate. It is not obvious to me that we should try to perfectly offset the changes in financial market developments by contemplating changes in the federal funds rate now.

What I think most likely is that we won't be as certain as we would like to be regarding growth risks and we won't be as certain as we would like to be regarding financial market developments before we have to begin a posture of removing policy accommodation. So with all those caveats and a view that policy remains more accommodative than we can allow it to be for too long, I will support alternative B and think that we have to remain very open-minded, very nimble, in our task of removing policy accommodation.

In terms of President Plosser's suggestion on "considerable," I think the reason for the debate over using that word is in my own view that these markets are still under considerable stress, but the trend from the last statement to this statement is that they are under less considerable stress. Therein lies the difficulty in wording this in the statement. If we do remove "considerable," it wouldn't surprise me that when we next meet we will say, "Boy, it seems as though stress is up. Wonder if we should put it back in?" I don't feel strongly, other than I don't like the idea of removing it now if we think that there's a chance that the trends, which are very tenuous, turn around. So I think I would favor the language that you have written. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thank you very much. Obviously, as we have all discussed, we are facing enormous challenges from the continuing strength in prices and price changes in energy and raw materials. Now, some of those are relative price changes that we don't have the tools to address directly. Recently, we have seen wheat come down as Australia has been able to replant, and it seems that things are going to come back. Corn has gone up, as we heard from a number of people around the table, because of the challenges there. We don't have the tools to address that directly, but obviously, when so many of these commodity prices and energy prices are going up, that leads to concerns about where both headline inflation and core inflation are going. So we definitely do have to be very mindful of that.

I think the type of approach that we are taking in alternative B is a reasonable one. Given the challenges that we are facing right now with the fragility in the financial markets—the continuing smoldering of those embers, with still chances that they could reignite and cause us a great deal of difficulty—it seems sensible to me to be roughly where we are now in terms of policy but to be signaling that we understand that challenges are coming from various sources that could lead to inflation pressures and that we need to be ready to offset those.

In terms of how accommodative monetary policy is, I think actually it would be worthwhile—and maybe at the end of this I might pose a question to Brian—to look at LIBOR–OIS spreads and how much they typically go up during recessionary periods. I know that other risk spreads typically go up, but my understanding is that those typically don't go up as much. Since so many contracts are based off the one-month and three-month LIBOR, that 75 basis points suggests that at least now we might want to take that into account in thinking about where monetary policy stands relative to other times when we would have had a funds rate at roughly this level.

In terms of the language, I share Governor Warsh's view on the use or lack of use of the word "considerable." I think President Stern's suggestion—this is always a very dangerous and difficult game—would actually push the markets further than they are because I agree that broadly the path that they are seeing in the future is a reasonable one for them to see. This language would roughly keep it there. Taking out the acknowledgement of downside risks to growth remaining would make me concerned because (1) I certainly see those as still being there and (2) I think that would push the markets further to think that this is a signal that next time we are going to do it, and I don't think we are quite there yet. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. Thank you, Mr. Chairman. I do support alternative B and the current language in the statement. I have no problem with that. I think it conveys what we need to convey. Although I think that the next move is very likely to be up and it maybe should be done quite soon, I would argue that we still need to have a lot of flexibility and to think in terms of having a lot of flexibility in where we may have to head in the future. I want to argue along those lines and outline why I think that is the case.

The first issue is something that the Chairman mentioned yesterday, about which I felt very strongly—in fact, I meant to say it, but as always the Chairman says things better than I could in this context—that there really is still a very serious possibility that the shoe could drop in the financial markets. The Chairman mentioned a set of institutions that we have to be concerned about, and although there has been some improvement in terms of the stress that the financial markets are under, I don't think we are out of the woods yet. We are likely to be, but we have to be ready to recognize that things could go south. So that's one issue. The second issue is that the recent positive data we have seen are, again, very tenuous to me. I'm hoping that they indicate that things are going in the right direction. But a bunch of things make me very nervous, which I mentioned yesterday—how consumers react in housing crises, consumer sentiment, and the big problem that is going to occur when people have to face very high prices of food and energy, which hit their pocketbook very directly. So, again, that could be quite contractionary. The good news that we have seen recently might reverse very quickly. The third issue is that I think the headwinds could be very substantial in the future, that this cleanup will take a long time, and in that case we could have very slow and subpar growth that could widen output gaps more than the Greenbook and most participants here are expecting.

So I do not consider the current stance of monetary policy to be overly stimulative. For me it is just about right and very much along the lines of what I think would be optimal policy. Of course, my view relates not only to the real economy. I also think that inflation expectations, as far as I can tell so far, are reasonably well contained. There is very little movement in the measures of inflation expectations that I pay most attention to. That argues that our stance is about right. I would also very strongly argue that I do not think that we have taken out a lot of insurance. I have argued that before. We have moved less gradually, which I think is very beneficial, and I would commend the Committee in that regard. But we moved in line with what the forecasts have been telling us optimal policy would be, and I think that is quite important.

However, here is why I think we need to have flexibility in the other direction. If you think about a risk-management approach, it should not be focused just on tail risk to economic growth, which has been our most major concern because of the financial disruption. It equally implies that, symmetrically, we should be just as worried about tail risk to inflation, particularly to long-run inflation expectations, which I think are the key driver of underlying inflation, which is what monetary policy can particularly deal with. Here we have a situation in which we have hit the perfect storm of shocks because of the huge supply shock and there are much more serious upside risks and tail risks in terms of long-run inflation expectations. So I really do worry that with long-run inflation expectations and, therefore, underlying inflation we are in a more fragile situation and that we have to be very cognizant of that in terms of what we do in the future.

The bottom line is that we may have to move very quickly to raise rates if any of several things happens. One is that headwinds are not as serious as I think they are likely to be. There is certainly a very serious possibility that things could be better than I expect. I would not be unhappy, so I would not get depressed, about that. Really more depressing would be if inflation expectations started to look as though they were getting more unanchored. Particularly, I would worry much more about what happens in terms of inflation compensation and the Survey of Professional Forecasters, paying some attention to consumer surveys but putting a lot less weight on them. If the canary starts to look as though it is keeling over, we have to move very quickly, and so I am going to watch that canary very, very carefully.

MR. FISHER. Before the python gets it. [Laughter]

MR. MISHKIN. Before the python gets it. I think another consideration is very important. I have to commend you on the Bluebook this time—it just had some great boxes. [Laughter] It would be nicer if they had a little color to them. As a textbook author, I think they could have been a little ritzier and have had a little color, but they were great boxes. In particular, a very important box was the one on the optimal reaction to oil price shocks. One thing that comes out very strongly from that box is that if your credibility is weak on commitment to price stability and containing inflation expectations, you would have to tighten more to restore that credibility and get to a policy that would produce better outcomes. So here is an issue that, with these supply shocks potentially causing a problem for long-run inflation expectations, we actually may have to react more quickly and more aggressively than we otherwise would. This is an issue that I have been concerned about in terms of communication strategy—about how we better anchor long-run inflation expectations.

So my bottom line is that I support alternative B. I would like to keep the language the way it is currently, which I think works quite well. But I do think that, going forward, we should not lock ourselves into what our policy is going to be, in either direction. We need to preserve flexibility because we could be very surprised, although I think that the signal we have made that we are more concerned about inflation risks is absolutely appropriate. We have to make clear that we will do whatever it takes, including raising interest rates when unemployment is rising, if we feel that long-run inflation expectations and inflation are not remaining under control.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN GEITHNER. Thank you, Mr. Chairman. I just want to say at the beginning that I think the way you framed your remarks yesterday had perfect pitch and balance, and it is really important that we not get ahead of ourselves in taking too much comfort from the fact that the first half was not as bad as we thought and think that the risks on the growth front are definitively behind us. The improvement in financial markets that many of you spoke of is not as significant as we think or hope; we have had a lot of false dawns over this period. A lot of what you see as improvement is the simple result of the existence of our facilities in the implied sense that people infer from our actions that we are going to protect people from a level of distress that we probably have no desire, will, or ability to actually do. It is sort of like waking up in the hospital and having them say, “You are not dead yet, but we are not sure you’re going to live.” It is not as good an improvement, and there has been a material erosion over the past four weeks. It is very unlikely that you will have a substantial improvement in overall confidence in markets, a durable improvement in market functioning, and a substantial reduction in those spreads until there is more clarity about the likely path of the economy going forward, house prices in particular, and therefore the cash flows associated with the huge amount of credit that was extended over the past five years.

Again, it is going to be very hard for us to have a better feel for the balance of risks on growth front and the financial sector until we think we see signs ahead of some significant deceleration in the rate of decline of housing prices, if not some actual bottom. On the basis of everything we know, that is still several quarters ahead. Maybe it is going to surprise us on the upside and maybe we are going to see a big improvement in housing demand, but I think that the sense of a bottom looks to be several quarters ahead of us still.

I would say that the risks are still acute. Sure, the markets are a little more confident that we are going to successfully avoid a systemic financial crisis, but I wouldn’t take too much comfort from that. I think it is also plausible that oil will be at $150 or $200 over the next six months or so. There is some material probability that the set of challenges on that front is going to get worse. So all that is just in favor of a fair amount of care and caution now, given the scale of the uncertainty out there and how fat the tail risks are on both sides of our mandate going forward.

I like, and fully support, the language in alternative B. I would not—as you might sense from my comments—take out the word "considerable" from the characterization of stress. I am pretty comfortable with the framework laid out here, and, more important, Mr. Chairman, with the broad balance and strategy that you outlined yesterday.

CHAIRMAN BERNANKE. Thank you very much. In April, we signaled that, following our aggressive rate actions and our other efforts to support financial markets, it was going to be a time to pause and to assess the effects of our actions. That was not that long ago, and I think it is appropriate to continue our watchful waiting for just a bit longer.

I talked yesterday about the balance of tail risks as opposed to the balance of risks. I think that, although the tail risks on the growth and financial side have moderated somewhat, they are still quite substantial. I agree with the Vice Chairman on that point. They arise from two separate but related sources. The first is that, notwithstanding the stronger-than-expected performance in the second quarter, I think there is an excellent chance that we will still see a recessionary dynamic with the associated strong movements in employment and production. Second—again as the Vice Chairman mentioned—I do not agree that systemic risk has gone away. I think it is in abeyance. There is perhaps, if anything, excessive confidence in the ability of the Fed to prevent a crisis situation from metastasizing. Even if we don't have a failure of a major firm, we still have the possibility of a significant adverse feedback loop as credit conditions worsen and banks come under additional pressure. So if I could try to think about this—I don't want to say "mathematically"—a lot of our discussion has implicitly suggested that there has been a linear model, which is that we are just trying to balance on the scales this risk against that risk. Again, if you are worried about preventing bad outcomes, you have to worry more about nonlinear or discontinuous changes. I think that, at this point, we still have significant risk of a nonlinear, discontinuous change in the financial markets or in the real economy.

Tail risks have risen for inflation. There is no question about it. I take what has been said around the table extremely seriously, and I am quite anxious about it, I have to concede. If I were making a comparison of tail risks to tail risks, I still think that the inflation tail risks have not yet reached the level of the concerns I have about the financial crisis. In particular, some important indicators—such as wages, inflation expectations, and core inflation—have not yet signaled a major shift. That being said, I do think we need to acknowledge the relative change in those risks, and we need to begin to prepare the market for the normalization that is going to have to come.

Both President Fisher and President Stern talked about the rhetorical aspects of our policy and the effects on policy expectations, and I think we are all in agreement that words mean nothing unless they are eventually backed up by actions. On the other hand, actions may be better if they are preceded by words, if you will. We do need to begin to prepare the markets and to communicate clearly so that people will know what’s coming and that the system will be better able to deal with that.

If I thought for sure that we were going to begin renormalizing very soon, I would propose doing it today. Why wait? But I think enough uncertainty and enough risks are on both sides that there is some benefit from waiting just a bit longer to see, first, how the financial markets evolve and, second, whether we continue this stronger-than-expected growth pattern or whether we begin to see a more recessionary-type of pattern. In particular, between now and the next meeting, we have two employment reports, a lot of other relevant information, and a lot of insight from the financial markets. At the same time, on the inflation side, we will see how commodity prices evolve, whether we have any kind of relief from what we saw in the last intermeeting period, how the dollar behaves, and how inflation expectations behave. All those things will give us a better sense of where we are and how we should proceed.

So I think we should try to be nimble. We should try to respond to the information as it comes in. We should be focused particularly on tail risks. I think we should begin to move, or should maintain, market expectations toward tightening. President Fisher, I think I have to note for the record that I don't think we should let political considerations affect our decisions in any way, and I am not concerned about that. I think we are all prepared to do what is necessary. I don't know what we are going to do in the next meeting or the meeting after that. But my expectation now is that, as others have mentioned, we will begin normalizing interest rates relatively soon, and we should, if possible, begin to prepare the markets for that.

For today, as I have indicated, I recommend no change in the federal funds rate target and alternative B for the statement. I think alternative B captures the facts pretty well on the whole. I won't go into it, but I think the inflation paragraph is a little more hawkish. It drops the discussion of a leveling-out of commodity prices. It doesn't refer to core inflation, which we have taken before as sort of a reassuring element. I'm disappointed that President Fisher is going to vote against his own language in alternative B, paragraph 4, which we have adopted and which I think is a very good expression of the risks.

MR. FISHER. I appreciate the adoption of the language. I think it is much better.

CHAIRMAN BERNANKE. I think President Stern's suggestion is interesting. I am a little worried that it might go just a bit too far in suggesting that we have discounted the downside risks. I am struggling with the "considerable" in alternative B, paragraph 2. I have sort of heard two for and two against. I don't know if others have a view. It is a bit risky to change, given how quickly things can move. But if others would like to express a view, I think yet a third thing that we could do would be to say, "Financial markets, though somewhat improved recently, remain under considerable stress." That might be a way to address it. Does anyone have any thoughts on that word? Any concerns? President Lacker?

MR. LACKER. I thought Vice Chairman Geithner's characterization of markets was pretty good, but it is compatible with your suggestion.

CHAIRMAN BERNANKE. Vice Chairman.

VICE CHAIRMAN GEITHNER. If we look back and try to recalibrate at each meeting whether things are getting better or things are getting worse, we would regret each zig and each zag. So I would just say that we have a suite of facilities in place. They are in place today. They are exceptionally significant in terms of a change in policy. They are there because we think they are playing an important role in helping facilitate the necessary process of repairing markets et cetera. If we were going to take them back tomorrow or dial them back substantially, then I would be willing to rationalize and explain that part of the judgment is that we think things are improving materially. I just feel as though the risk is too high.

CHAIRMAN BERNANKE. I think the Vice Chairman raises an interaction that I hadn't thought of, which is that our facilities are existing under the premise of unusual and exigent circumstances, and we don't really want to undercut that. President Fisher.

MR. FISHER. I would support what Vice Chairman Geithner mentioned because I think we may be faced with a situation of having to raise rates even though there is considerable risk in the financial market. So I think showing sensitivity to that is very, very important. On a second point, Mr. Chairman, I do appreciate the change in the language. I also suggested some changes to alternative C, but I won't go into them. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Yes. President Plosser.

MR. PLOSSER. Given that I suggested removing the word "considerable," my purpose there was merely to indicate, as many people around the table have said, that things are somewhat better. I don't think that we should suggest that problems are solved, because things are still under stress. I agree with Vice Chairman Geithner in that regard. I am willing to withdraw that suggestion. I don't feel that strongly about it. I thought it would have been useful to convey a direction that we saw. But I don't disagree with Vice Chairman Geithner's suggestion that these things can reverse themselves and maybe a little more stability might save us some zigging and zagging down the road. So I withdraw that suggestion. I can live with the language as it is, if that simplifies things.

MR. MISHKIN. And it will come out in the minutes.

CHAIRMAN BERNANKE. Of course, all of these subtleties will.

MR. PLOSSER. As they always do.

CHAIRMAN BERNANKE. I would like to propose no change in alternative B as given in exhibit 1. Any further comment? If not, could you please take the roll?

MS. DANKER. Yes. This vote applies to the directive as well as the language of the statement in alternative B of exhibit 1. "The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output.

To further its long-run objectives, the Committee in the immediate future seeks conditions in reserve markets consistent with maintaining the federal funds rate at an average of around 2 percent."

Chairman Bernanke	Yes
Vice Chairman Geithner	Yes
President Fisher	No
Governor Kohn	Yes
Governor Kroszner	Yes
Governor Mishkin	Yes
President Pianalto	Yes
President Plosser	Yes
President Stern	Yes
Governor Warsh	Yes

CHAIRMAN BERNANKE. Thank you. Why don't we take a fifteen-minute coffee break, and we will come back and discuss investment banks.

[Coffee break]

CHAIRMAN BERNANKE. Why don't we commence, then. This is a joint FOMC and Board meeting, and so I need a motion to close the Board meeting.

MR. KOHN. So move.

CHAIRMAN BERNANKE. Without objection. Okay. Our topic for this morning is investment banks, their supervision, and related policy issues. Let me turn it over to Art Angulo of the New York Fed, who will introduce the topic. Art.

> MR. ANGULO.[5] Thank you, Mr. Chairman. We're now in the handout. Why don't we start on page 2, and I'll give you an overview of where we are headed this morning, at least from my section. First I'll talk a bit about the objectives and the approach of our monitoring program. Then I'll talk about how we're focusing primarily, but not exclusively, on four investment banks and where our focus is there. I'll say a few words about the extent of usage of our section 13 facilities. Again, the PDCF is primarily our focus, but for the sake of completeness, I'll also discuss and provide some highlights on TSLF usage by the primary dealers. Then I'll close by just highlighting near-term issues that we're addressing or dealing with.

[5] The materials used by Messrs. Angulo, Alvarez, and Parkinson are appended to this transcript (appendix 5).

On page 3, in terms of the objectives of our monitoring program, we're very cognizant that our efforts are tied closely to our section 13(3) authority in the establishment of the Primary Dealer Credit Facility. Our effort does not stem from our general supervisory examination authority. We're very clear on that. We have two key objectives. The first is the ability to exercise informed judgment about the capital and liquidity positions of the primary dealers that have access to the PDCF. Second and just as important, we're aiming to, in shorthand, mitigate the moral hazard that accompanies the creation of the PDCF in particular. So we will make sure that the PDCF does not undermine the incentives for the primary dealers and the firms that own them to manage capital and liquidity more conservatively.

On page 4, in terms of our approach, our focus is on the firms that own primary dealers that are not affiliated with financial holding companies. That's primarily, but not exclusively, the four largest investment banks. I'll touch at the end of my presentation on several other primary dealers with which we've had interactions of late. Our effort does include an on-site presence, but that is limited to examiners at each of the four largest investment banks. We also have a small off-site staff, which includes staff members from our Research Group, our Markets Group, our Legal Group, and Bank Supervision. We are in direct contact with the management of these firms. We are obtaining information directly from the firms as well as from the SEC, and of course, we are communicating and coordinating closely with the SEC. It's important to point out, however, that we're not engaged in traditional bank supervision. Our scope is fairly narrow. We're not conducting examinations, and we're not providing or issuing examination reports back to the firms. Therefore, we are making assessments, I would say, without the normal range or normal complement of supervisory protections that we're accustomed to. To be frank, that carries with it some risk and some vulnerability for us. I'll touch on that at the end of my presentation as well. Our current focus is limited or narrowly focused on capital, as well as liquidity, which I'll get into in a moment. So let's turn to page 5.

Page 5 gives us a view of the leverage of the four investment banks. I should note that it may be a bit confusing at first glance. Leverage is typically expressed as a multiple. We've converted that into ratios because bank supervisors tend to look at ratios. So bear that in mind. Investment bank leverage does tend to be cyclical. This graph picks up really the latter half of the last cycle, so I can orally give you some perspective. If this graph had moved back to the left, in approximately 1999 to 2001 you would have seen the investment banks deleveraging in response to the Russian default and the LTCM crisis in the third quarter of 1998. So we would see leverage coming down between then and 2001. In 2001-02, leverage was essentially flat, and then this graph picks up the increasing leverage from 2004 to the end of 2007. As you can see, 2007 marked the cyclical low point in the ratio, or high point in leverage as a multiple. Since then, the firms have been deleveraging. Right now they are clustering around 4 percent, with the trajectory, I hope, still up, and we may have something to say about that.

CHAIRMAN BERNANKE. Art, could you define "leverage" in this picture.

MR. ANGULO. This is gross leverage, so it is just equity—in this case, a ratio of equity over total assets—a very blunt measure.

Page 6 gives us a more current view. In the left-hand panel is the tier 1 capital ratio for the four largest securities firms. As I think you know, the SEC has made a decision to use and hold investment banks to a Basel II ratio that's consistent with how the bank supervisors apply it. To date, the firms have not disclosed those ratios. That begins this quarter, the second quarter. For Goldman, Lehman, and Morgan Stanley, that quarter ended May 31, 2008, so we show the estimated ratios there. These were not in their earnings releases, although they were picked up by some of the analysts in their conference calls—so these numbers are seeping out there. Merrill reports on a bank cycle, June 30, so they have not yet released their tier 1 capital ratio.

A couple of takeaways from the left side of this page: First, the quarter has not ended, but Merrill was obviously low compared with its peers. They do have the benefit of seeing and being aware of where their peers have come out, so we shall see if Merrill takes some action in the near term to bolster capital. The second point is that the investment bank ratios look fairly high compared with where the commercial bank tier 1 capital ratio would be. There are a couple of reasons for that. First, the assets of the investment banks are concentrated in the trading book, so there are two issues there. Those assets tend to have a lower credit charge. The other issue, which we have to do more work on, is that we need to understand better the modeling methodologies and the model approvals that the SEC has given these firms to compute tier 1 capital. That could be a significant factor as well. So at first blush they look very healthy, very high; but I think it will take more analysis to get beneath those.

The right-hand side of page 6 gives another way of looking at capital—what we call an "FRBNY-adjusted leverage ratio." What we're trying to do here is to have another way of putting investment banks and commercial banks on a somewhat similar footing. So in terms of the numerator, we use tangible equity for two reasons. First, it's a higher form of equity capital, perhaps the highest form. Second and just as important, it avoids current differences between how investment banks and commercial banks calculate tier 1 capital. Right now there's a grandfathering period in which the securities firms are allowed to carry a higher portion of subordinated debt in tier 1 capital. It does not apply to bank holding companies. This puts them on more of an equivalent basis in terms of the numerator. The deal is the same with the denominator. Again, we're trying to make allowances for the differences in business models. So here we subtract from the denominator secured financing assets. These are reverse repos and securities borrowings. Of course, these are collateralized by cash and thus are relatively low-risk assets. So by making those two adjustments, we have a somewhat comparable view. The takeaway here is that they don't look too far apart—they are not dissimilar—at least at this point in the cycle.

Why don't we move now to page 7, to liquidity? I have a picture of liquidity, but not a full picture. This shows the trend in parent company liquidity pools. This is unencumbered cash or high-quality securities at the parent company of the four investment banks. As you can see, the trend has been increasing since the middle of March. The general trend has been to increase. This, of course, tells us only half the story because one wants to know what that pool is held against. So, let's turn to page 8, and I can talk a bit about how we're trying to look at and assess this.

We've been engaged with the SEC and have entered into an approach in trying to assess liquidity at the four investment banks. When we first started this endeavor back in late March, the first thing we did was to go back to the firms and to say, "Show us what would happen to liquidity if you experienced a Bear Stearns, full-run kind of scenario? For that exercise we want to know what assets you have eligible for the PDCF. We want to know how bad and how dark it would get." That exercise was pretty demanding. No one would have passed the test. We looked at that and asked whether a full run on the institution was an appropriate way to look at it or an appropriate standard to hold them to. So we came up with another scenario that we put back to the firms. We basically said, "Listen, we want you to do a stress analysis for us. Look at something that's pretty severe but short of a full Bear Stearns scenario. Look out over thirty days. By the way, you have no access to the PDCF. Let's see how that looks." We're in the process of doing that right now. The table on the left gives you an idea of some of the things that we're looking at and how we've asked the firms to provide the information to us. Basically there are several buckets: (1) their unsecured and secured funding; (2) what comes on the balance sheet under stress, either general market stress or firm-specific stress; and (3) the impact from operating cash flows toward the bottom. Those are the combination of liquidity claims that they would face under stress. The last piece is the additional funding from affiliated or unaffiliated bank lines along with, obviously, the liquidity pool, which we have separately. Basically, we're engaged in an exercise in which we compare and converge assumptions. We've had multiple discussions with each of the four firms, trying to understand where their assumption differed and trying to converge those. We then constructed, or are in the process of constructing, a cash flow analysis. Again, we are relating their cash needs under stress, given these assumptions, to their available liquidity pool plus the unaffiliated or affiliated bank lines that can be drawn.

The drivers here, obviously, are going to be the mix and term of secured funding, which is going to be a big driver in terms of the liquidity needs, as well as some of the operating cash flow assumptions that firms make in looking at a stress scenario. We are fairly close to pulling together information with which we can construct an analysis, go back to the firms, share with them our assessments of where they are, and give them a chance to explain to us how we were spot on or where we may have missed certain things. But those conversations will happen in the near future. So that's basically what we're doing in terms of liquidity. It has been an interesting exercise. I think that there is no simple way to look at liquidity but that this is the best way to do so.

Let's turn to page 9. I have just a few words about the use of both the PDCF and the TSLF. I have graphs later on the TSLF. A graph of the PDCF usage would be kind of boring. It would show Bear Stearns as far and away the dominant borrower. Actually I think Bill Dudley conveyed to you yesterday that Monday was their last night of borrowing under the PDCF. So Bear Stearns is now out. Until very recently there were three others that I'll call chronic users of the PDCF. First, we had Cantor. I'll say a few words about that. They started borrowing in late March, initially $600 million to $700 million. They stabilized in mid-April at about $500 million. We saw that borrowing coming in every night. Members of the team here spent one afternoon at Cantor at the end of April. We asked them for some information in advance. We spent a good chunk of time with them. We came away not being comfortable with the number or the size of their borrowings in relation to the firm's capital. We then consulted with our colleagues in both the Legal and Markets Groups. We asked Cantor to submit a plan to wean itself from the PDCF and to submit that to us in writing. We then followed up with a friendly letter from Mr. Dudley and Mr. Baxter asking for a little more information and a little more specificity. They got the point. They started to bring that down in accordance with the schedule they gave to us. In fact, they ended up winding down to zero in their borrowing last week, ahead of schedule, and they obtained third-party financing. So that was the Cantor story.

Countrywide was a somewhat similar situation. They had been borrowing from day 1 of the PDCF. Initially they would ask us for $1 billion. They had borrowed and stabilized at about $900 million. Our Markets Group initiated a conversation with Countrywide Securities at the end of May. In short, we were uncomfortable with, in essence, providing bridge financing to the close of the acquisition by Bank of America. We felt some vulnerability there. So our initial salvo or proposal back to Countrywide Securities was that they needed to wind down the use of section 13(3) facilities by the end of June—both the PDCF and the TSLF. They came back to us and in essence said, "Well, couldn't you just let us go into July a bit because our merger is supposed to be approved today actually by the Bank of America board? Our legal Day 1, our closing is July 1. We can transfer positions July 2. What's a couple of days among friends?" We had a little negotiation back and forth. We reached, I think, an agreement that was amenable to all. They agreed to wind down their use of the TSLF—no new borrowings. They could swing some of that into the PDCF. We would allow them to go until the closing, July 2, when they could transfer those positions. In return we got a little extra margin. So, in effect, those borrowings were being collateralized at a margin of roughly 7 percent. We got an additional 13 percent, bringing us to 20 percent, which will bring us through until July 2. So I think all sides are reasonably comfortable there, and with friendly persuasion, Dudley and Baxter sealed the deal there.

Let me say a few words about Barclays Capital. We handled this a bit more informally. They started using the PDCF more in late March, at around $5 billion. They got to a peak of about $7 billion. Both Bank Supervision and Markets had conversations with Barclays, asking them to tell us a little more about why they were using this. What's the rationale? They had a consistent story. They would tell us that it was economically advantageous for them to use that. They thought it was good. In one conversation with our colleagues in the Markets Group, one of the traders conveyed that Barclays thought they needed to support the TSLF in much the same way that they supported open market operations. Our colleagues in Markets very quickly disabused them of that notion. After a couple of conversations, they got the message. They eventually ceased borrowing from the PDCF around the beginning of June. So as of now, the only outstanding we have is with Countrywide Securities, and that should come to a close next week, knock on wood.

Again just for the sake of completeness, on page 10 I'll talk about the TSLF usage. First, schedule 1, which is OMO-eligible collateral—as you can see among the primary dealers, Merrill has had the highest amount outstanding. Merrill is, I guess, the tan line. The biggest users have been the commercial banks—Deutsche Bank is up top, a pretty consistent user. Then Citigroup (the green line), which has also been a fairly consistent and heavy user. Let's turn to schedule 2 (page 11), which is the less liquid collateral. Here among the primary dealers, Lehman (the blue line) has been the most consistent user, followed by Merrill Lynch. As you can see, UBS among the banks was clearly far and away the biggest user, although within the past two weeks they have reduced their TSLF borrowings. So that's, very briefly, the top five. There's again a bit of a mix here. But as you can see, the investment banks are not the biggest users of the TSLF.

Let's turn to page 12, and I'll finish up here. I'll just highlight a very near-term challenge that we face, and I think it will provide a nice transition to Scott's and Pat's portions of the briefing. I don't want to get too much into their sections. But I think generally we have an issue. I think that, the longer we stay on site with this effort, the reputational risk to the Federal Reserve increases. As Governor Kohn testified last week, we're not examining; we are just very narrowly focused. I think that message was well received. At this time, it's not too problematic. But if someone is up on the Hill six months or a year from now, I think it's going to be very difficult to say that we're just doing this liquidity and capital thing. People are going to want to know a little more about our judgments and how we made those judgments. As I said early on, I think there's some risk to making those judgments without having a little more information. So I think the trick for us is, if we have our traditional bank supervision model on the left and what we're doing right now on the right, we have to move this way, more to the left. By no means should we be way over here. But I think we have to figure out how to get this way a little more. With that, I will end my remarks and pass to Scott and then to Pat.

MR. ALVAREZ. Well, as you can tell from Art's presentation, there's been a significant amount of information-sharing and collaboration already between the Federal Reserve and the SEC. So we've taken this opportunity simultaneously with what's going on with the primary dealers to fashion a document that will lay out a framework for how this information-sharing and collaboration will go forward.

We've made some pretty good progress on a document, but we're still negotiating. In fact, the Chairman is negotiating this afternoon with Chairman Cox. This is one in which the principals have been intimately involved.

The agreement as it is currently structured really has two parts. The first part outlines plans for sharing information between the two agencies. Here I would divide the world into two pieces. There are the consolidated supervised entities (CSEs), which are the four large investment banks—Goldman Sachs, Morgan Stanley, Lehman Brothers, and Merrill Lynch. We have agreed to share information and analysis of the financial condition, risk management, internal controls, capital, liquidity, and funding resources of those firms. The agreement is focused primarily on those areas—so the financial condition, liquidity, and risk management of the firms. As you know, we have accessed information from these companies in connection with our providing liquidity through the PDCF and the TSLF, so we'll share that with the SEC. Similarly, the SEC, which is the primary regulator for those and has access to much more information, will share their information with us. We've also agreed to share information and analysis on various financial markets that these companies are intimately involved in—in particular, the tri-party repo market and the interbank lending market.

Now, two bank holding companies participate in the SEC's CSE program—Citigroup and JPMorgan Chase. We have agreed to share with the SEC the same type of financial and risk-management information regarding those two firms but only to the extent that that information affects the broker-dealers that are controlled by those two firms. So we are not expecting, nor is the SEC expecting us, to share information that relates to the condition of the bank or the condition of the other nonbank portions of either of those two firms—just the part related to their broker-dealer.

We have an interest here in the Federal Reserve in the financial condition of broker-dealers that are not in the CSE program. That would be any broker-dealer that's in a bank holding company regulated by the Federal Reserve. Our plan is to include an information-sharing arrangement regarding those institutions as well.

More broadly, the SEC would provide us with information on an ongoing basis about the financial condition and risk management, internal controls, capital, liquidity, and funding resources of all broker-dealers that are controlled by a bank holding company. This would allow us access beyond what we're currently getting. Right now we're getting primarily FOCUS reports on the broker-dealers, which are not always the most informative documents. So we'll get more access. We also are expecting to agree to provide similar kinds of financial and risk-management information to the SEC, again to the extent that the information affects the broker-dealer. So we would not be routinely providing information about bank holding companies related to the bank or related to the nonbanking operations that are not broker-dealers. We also are expecting to include a provision that outlines several existing agreements that we have for sharing information regarding some of the clearing companies—DTC in particular—transfer agents, municipal securities dealers, and investment advisers. This would simply incorporate, without changing, the arrangements we already have. An essential part of all this sharing of information is that both agencies would agree to keep the information confidential. In addition, the SEC is agreeing not to use our exam or supervisory information, in particular any opinions that we might have, in their enforcement actions or investigations without the permission of the Federal Reserve.

The second part of the agreement, as we're working through it, relates to supervisory expectations for the four large investment banks and for the primary dealers that have access to the PDCF and the TSLF. There the current proposal is that the two agencies would agree to collaborate and coordinate with each other in obtaining access to the information on the financial condition of these organizations and in setting supervisory expectations concerning the capital, liquidity, risk management, and funding for the CSEs and the primary dealers. We'd also collaborate and coordinate our communications to those entities about supervisory expectations, something that's already begun with Art and his group.

The memorandum of understanding (MOU) is intended to serve as a bridge from the existing world to whatever brave new world the Congress may put together. But it is not tied specifically to the PDCF or the TSLF and is intended to last beyond access to those facilities. It also does not change the legal authority that either of the two agencies has. We continue to have full, unfettered legal authority over bank holding companies. They continue to have full, unfettered authority over the broker-dealers. But we do agree to talk more, collaborate more, and coordinate more. As I mentioned, the MOU is substantially worked out. We are still, though, in negotiation over a couple of key points. Our goal is to have it done this week, we hope with an announcement at the end of the week or sometime next week. We expect that the terms of the MOU will be made public. As soon as we have something that's concrete enough, we'll also send that around to you.

MR. PARKINSON. Thanks. I'm just going to go over the last few pages of the handout you have, pages 13 through 15. Page 13 is just a table reminding you who the primary dealers are and providing some basic information about their size, borrowing activity, and regulatory status. As you probably know, there are currently 20 primary dealers, although as Art mentioned we're about to lose two of them—Bear Stearns and Countrywide. An important point to note, which ran through Scott's presentation, is that although the investment banks—the four firms that are subject to consolidated supervision by the SEC under their CSE program—are among the largest primary dealers, there are some very large bank-affiliated dealers, including not only affiliates of U.S. banks but also affiliates of German, Swiss, British, and French banks. Also, if you look at column 3, you'll see—and these are data that we get from the two government securities clearing banks that facilitate tri-party repo, JPMorgan Chase and Bank of New York—that it shows that the investment banks are not, in fact, the largest borrowers in the tri-party repo markets. Rather that distinction belongs to Deutsche Bank, Banc of America, and Barclays. I think that's significant because arguably the biggest threat from Bear's bankruptcy was the impact on the availability of secured financing, especially from money funds and other highly risk-adverse investors that provide tri-party financing to the dealers. So we have some very large borrowings by those non–investment bank firms. Columns 4 and 5 provide some information about how these firms are regulated. Essentially the legal entity itself in every case but one is a broker-dealer regulated by the SEC, and in that case it's a government securities dealer regulated by the Treasury but the SEC really does the enforcement of those Treasury regulations. Finally, all of these firms except one, Cantor Fitzgerald, which is an inter-dealer broker, are subject to some form of consolidated supervision by one or another consolidated regulator, although the regimes can differ appreciably. The OTS has a regime for Countrywide, I guess being a notable example itself, quite different from the one that we would apply.

So with those facts in mind, turn to the next two pages. I don't intend to go through all these questions, but what we've done here is set out some issues for discussion. Basically there are two sets, one relating to the future of our liquidity facilities for the primary dealers and the other relating to the supervisory arrangements through which we're seeking to mitigate the moral hazard that those liquidity facilities create. In each case, there are questions about what to do under current laws, until such time as the Congress may change those laws. Then there are questions about what legislative changes we might seek, particularly if the Congress shows an inclination to legislate in this area. Our purpose for this list of questions is to stimulate a discussion among you about these important issues and to provide you with an opportunity to express any preliminary views you may have. With that, I think we'd be pleased to answer questions on any of the three staff presentations. Thanks.

CHAIRMAN BERNANKE. Questions for our colleagues? President Lacker.

MR. LACKER. Thank you. Thank you, Art, Scott, and Patrick, for a very forthcoming presentation. Two things for you, Art: First, on page 8 you presented some information about the details of the stress test that you're applying, and the table lists various unsecured funding and secured funding from other sources, and you have numerical assumptions for the severity of stress. I take it that you apply those to the balance sheet numbers and do some calculations to calculate the stress test.

MR. ANGULO. Correct. We went back to the firms and asked them to give us the information cut this way because it's not readily available from any public information that we have. We also asked them to give us, under a severe test scenario, what their assumption was.

Based on the submissions that we got from the four, which we converged and massaged, we came out pretty close to these assumptions. We didn't make these up.

MR. LACKER. I was going to say that you essentially asked the question, What does "severe" mean in your stress system?

MR. ANGULO. We left it somewhat in their hands, saying that it's going to be short of a full run.

MR. LACKER. Then you had some iteration to get to an agreed-upon set of numbers for these.

MR. ANGULO. Yes.

MR. LACKER. Okay. Now, you also said that you started your first iteration by asking them to give you the results of a Bear Stearns failure scenario. What numbers does that correspond to on this table?

MR. ANGULO. You would have a lot higher numbers on secured funding. You would have the numbers coming much closer to the illiquid, 100 percent, and you would have a—

MR. LACKER. Well, wait. I'm sorry. I lost you there.

MR. ANGULO. Under fixed-income finance, for example, under the secured funding, there's liquid and less liquid. Those are 20 percent and 50 percent. Those would have been approaching 100 percent.

MR. LACKER. So the severity, that's how much of the money goes away.

MR. ANGULO. How much runs—exactly.

MR. LACKER. Okay. So do you have those numbers for Bear—what they actually experienced?

MR. ANGULO. The SEC is working on a post mortem. They have promised to share it with us when they're done. They have folks—I wouldn't say forensic accountants—in there looking at that, trying to piece together what happened. So we did not have the exact numbers.

MR. LACKER. You didn't have the exact numbers.

MR. ANGULO. No.

MR. LACKER. But you knew roughly what they were.

MR. ANGULO. Things moved pretty quickly at the end.

MR. LACKER. I see. Well, I was just interested in information on exactly how that transpired. If there's a chance that you could share with us that information when you get it, that would be very useful. A second question for you: You noted reputational risk from being in on the supervisory basis, and I want just to probe as to how you think about that. What eventualities would be risky for us?

MR. ANGULO. I guess a couple. We're saying that we're looking at the capital position. I think Governor Kohn was careful to say in his testimony that we're looking at capital in relation to near-term earnings prospects. That gives us kind of a short window, but we know from examining banks that a capital number that's reported to you depends on how you're carrying your assets. We have not done any work in trying to get behind, for example, the evaluations on Lehman's commercial real estate portfolio. That's a potential vulnerability there. Also, we have not really looked to a consolidated assessment of risk management at these firms, something we do in the bank supervision process. So we're basically taking the inputs, for lack of a better word, at face value and not doing our own work to try to validate those. That's what I was referring to in terms of the risk to us. I think as long as we're there, people expect us to be doing a little more than what we've been doing to date.

MR. LACKER. So it's essentially the risk that, after the fact, marks are questioned, and they ask, "You guys were in there—why didn't you . . .?" I understand that. Thanks.

The third question is for Pat. You talked about the repo market. My understanding is that some supervisory work under the LFI (large financial institution) umbrella is aimed at conditions in the repo market and mitigating some risk there. You mentioned that it was obviously an important factor in Bear. To what extent do you think paying interest on demand deposits would obviate the need for the huge volume of transactions in the repo market and the extent to which that legislative prohibition could have contributed to the market structures and fragility that gave rise to what happened in Bear.

MR. PARKINSON. I can't answer that, but that's a good question. I mean, the basic problem here is that you have a tremendous demand for investments that have essentially the characteristics of Treasury bills, but the supply of Treasury bills isn't nearly as large as that demand coming from money market mutual funds and from investment of cash collateral on securities lending and other kinds of secured financing. Over time, the marketplace has come up with synthetic Treasury bills of various sorts, but those short-term investments have been created outside the banking system by and large because the inability to pay interest on demand deposits doesn't allow them to be provided by the banking system. Now, if that prohibition were removed, I think you would see banks offering things that would be competing with overnight repos, overnight commercial paper, and other sorts of things that are outside the banking system that are meeting these needs.

In terms of the effects on stability, whether that leaves us in a better place obviously would depend on how good a job we do of regulating maturity transformation by the commercial banking system. An interesting question there is—whenever I hear Art give his presentation and look at these stress tests we're applying to the investment banks, even under current conditions, when they're not offering overnight interest-bearing deposits—how well our banks would fare if we tested them against these standards. But I think your observation and your question are good ones.

MR. LACKER. I mention that because it sounds as though it would be worthwhile knowing if it's important. Since we've asked the Congress twice now for permission to pay interest and they've declined, and if this was a factor in the recent crisis, we might want to point that out to them as part of our legislative dialogue with them over the next couple of months to try to get them to do something.

CHAIRMAN BERNANKE. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. Just a comment on President Lacker's question: I guess in the end it would depend on how big Bear Stearns's balance sheet would have been and whether paying interest on demand deposits at commercial banks would have somehow shrunk Bear Stearns's balance sheet and the secured funding that could then run. So it's pretty complicated. It's not obvious to me whether it would have made Bear Stearns a smaller player and a less significant part of the market, but it's interesting. Tim looks as though he wants to say, "Yes, it would."

VICE CHAIRMAN GEITHNER. No. May I? You know, we think that the money funds finance about a quarter or a third of the stuff in tri-party. Money funds have a unique type of liquidity risk. So it is possible, if the same set of assets were financed by banks, that because banks have a different liquidity risk the system would be more stable. So you can maybe say, even with the same balance sheets as investment banks and the same mix of illiquid stuff financed through that mechanism, if the banks were the dominant providers of liquidity or it was provided through banks, that the system would be more stable, and the broader protections that we designed over the last century to limit the risk of runs on banks because of the risk to the system might have more power, insulating us from a system where nonbanks are large. I think that's the argument.

It would be interesting to know a bit about the politics on the Hill of thinking about that legislative change. It would probably look a little like the Middle East, I suspect. [Laughter] That would be a huge change in the relative return on different types of financial businesses that now would come with that. But it would be worth knowing a bit about the history of that debate in the past and what the probability is that we could get something like that through.

MR. KOHN. I also had a question, Mr. Chairman, and it's on the PDCF. I find some tension in my own attitudes here. Your leaning all over these people not to borrow helps protect the Board's decision that this is unusual and exigent, credit couldn't otherwise be available, and all of that. So it's supportive of that. On the other hand, it sounds really like what we used to do with commercial banks all the time and thought it created stigma in the process. We don't want you to borrow. If you come in and borrow, given that we don't want you to borrow, you must really be hurting to overcome Art Angulo's or Bill Dudley's frown. So I think the more we do this, the less useful this thing is as a backstop in some sense. I don't know. I don't have an easy answer as to how to resolve this tension.

VICE CHAIRMAN GEITHNER. Mr. Chairman, may I—not to preempt Art and Scott—in this case? I completely agree. It is very important not to undermine the value of these liquidity backstops by introducing stigma in their use until we get to the point at which we want to dial people back. But the decisions or the actions we took in the context of Cantor and Countrywide had a very compelling rationale. It would have been irresponsible for us, given the facts that over Cantor we have no comparable framework of supervision and that their exposure was very large relative to capital. In that context, we could do it without any risk that we were going to stigmatize the use of the PDCF because it's a unique thing. Countrywide, as you know, had a slightly different but similar rationale. It would have been imprudent for us to have had a substantial amount of securities outstanding, insufficiently collateralized, in the event that the deal didn't go through, because they were not viable on their own without Bank of America's buying them. That was a necessary and prudent thing to do. I think also that the risk was very limited that we introduced stigma to the facilities. The Barclays thing was more delicate. We would not say to them, "You can't use the facility." We just asked some careful questions about what they were doing and why, because their pattern of use was so different from everybody else's in that context. But I completely agree with your concern about that stuff. I think we must be very careful going forward that we don't do things that will alter this balance.

CHAIRMAN BERNANKE. President Lacker, you had something?

MR. LACKER. Yes. About the general topic of stigma and lending at our facilities, I think it would be a useful agenda item for future research, and it would be useful for us to work at thinking carefully about this. Stigma represents some information revelation to market participants attending on some act, whether it's borrowing from us or from someone else. The usual presumption is that more information is better. We talk as if stigma is a bad thing. So I'd want to see a model that lays out how the sense in which it's a bad thing counteracts the sense in which information is usually a good thing. I'm really curious about that. I think it's something we ought to think more carefully about.

CHAIRMAN BERNANKE. President Plosser, did you have a comment?

MR. PLOSSER. Yes. I asked Bill Dudley yesterday a question about what I had heard from the Street—that they perceived that stigma was attached to it. With this conversation, it certainly appears to me that I was hearing them say that, at least from the investment banks' point of view, they do feel that some stigma is already attached to it, good or bad. Now that I've heard this discussion, it is consistent with what I was hearing from those Wall Street firms.

MR. DUDLEY. May I just interject one thing on this? Vice Chairman Geithner makes the important point that one issue is counterparty risk for Cantor and Countrywide, which was sort of separate. The other issue is, since this is permissible only under section 13(3), that it can't be a chronic source of funding and it can't be part of their core funding plan. We want to make it clear to them that this is going to go away, and we want to be confident that they're not dependent on the PDCF as a source of funding. So I would distinguish between Barclays coming in occasionally with Barclays coming in every day, and that's really the point we were trying to make to them.

MR. ANGULO. It may be too fine a distinction, but we didn't say "no" to anyone when they came in. When they came in and stayed for a month and a half or two months, then we started to say "no."

VICE CHAIRMAN GEITHNER. But these are very different. I'm sorry—

CHAIRMAN BERNANKE. Go ahead. Finish your sentence.

VICE CHAIRMAN GEITHNER. I was just going to say that it's a very delicate balance. We want this set of firms to get themselves to the point where, in the eyes of the market, they have a more conservative mix of leverage (appropriately measured) and funding risk so that they are less likely, even in a pretty adverse shock, to need to finance illiquid stuff with their central bank as a defense against that liquidity pressure. We're trying to do that without forcing a level of deleveraging that would be adverse to our broader objectives of trying to get markets back to some point where they're functioning more normally. We're not going to get that perfect. By definition, our facilities by design should allow them to run with a mix of leverage and liquidity risk that is above what the market probably now would permit. In the absence of our facilities, leverage and liquidity risk, if you measured it on a scale, would have to be lower in some sense. But that's the purpose and the necessary complement of the facility, and it is a delicate balance.

But just to come back to President Plosser's point, I don't think that the stigma is the result of how we're applying the discretion we preserved for ourselves around use. It is really the result of the fact that, particularly if you're at a point when you perceive escalating concern about your viability, people don't want to risk that their pattern of use, if disclosed, would magnify the concern. That's really what accounts for the care in use, particularly as concern about viability has been intensified these last few weeks or so.

MR. DUDLEY. If I could add just one more thing, I also think that the stigma doesn't really undercut the benefit of the PDCF as a backstop to these firms' financing. If the stigma really undercut the benefit, then the stigma would be quite important. But I think that the PDCF is still a very viable backstop even with some stigma associated with it in the current environment.

CHAIRMAN BERNANKE. President Hoenig, did you have an intervention?

MR. HOENIG. Yes. To follow up on Governor Kohn's point, I think it's important to our discussion going forward in terms of how we view these firms, from commercial banks to investment banks and primary dealers, because we are lending under exigent circumstances to these institutions under the primary dealer facility. Therefore, they almost by necessity should be concerned about stigma if they were to continue to borrow through there. On the other hand, it's important because the TAF is a different instrument and has different implications going forward in how we think about it and whether we want stigma with that. I think about how and how broadly we view different financial institutions, that is, investment banks. Are they blending into commercial banks? What about beyond that? We are going to have discussions about other types of financial institutions—should they not continue to be lent to only under exigent circumstances versus an ongoing TAF type of arrangement? So I think there is stigma and probably should be unless we are concluding that they're more like banks than not like banks.

CHAIRMAN BERNANKE. We're going to have a chance, of course, for everybody to give their views. President Fisher, did you have a question?

MR. FISHER. I just wanted to get in on this point that Governor Kohn raised. I'm not uncomfortable with our being parsimonious with the Primary Dealer Credit Facility. It is under unusual and exigent circumstances, and I think we need to be sure that they are unusual and exigent circumstances. That's the reason it was created, and I think we have to respect that. I'm just wondering, judging from the decline in the extent of the outstandings and given what you described, can we assume that there's a lessening of unusual and exigent circumstances? That's my question.

MR. ANGULO. I would defer to my colleagues in Markets, but I would just give one anecdote. Over the past few weeks, in particular, when Lehman announced its second-quarter results, some observers in the market stated that Lehman might not have come through this period if the PDCF had not been there. They never drew on it. I think it's an interesting point. I think there may be some relevance, some truth, to that. Bill, you would have a better sense as to whether the markets are back to normal or not.

MR. DUDLEY. I don't think they're back to normal, and I also think very strongly that the amount of use of the Primary Dealer Credit Facility is not a guide to how important it is as a backstop for financial firms.

MR. FISHER. That's my point. That's important.

MR. DUDLEY. There were a number of people to whom we talked who said that the reason they stayed with Lehman during this period of stress was that they knew that the Primary

Dealer Credit Facility was there as a backstop. So I have a high degree of confidence that Lehman would have been in great difficulty without it.

VICE CHAIRMAN GEITHNER. Just to make sure—it isn't quite as awkward as it sounds. I mean, it's not clear. The test for us about whether or not these make sense is not fundamentally about whether the PDCF would save Lehman from itself. I would just make the observation that we thought originally that you could look at the bid to cover and at the clearing price in the auction facilities as a measure of stress in markets, and they would be a test by which you could see conditions. I think it's important to recognize that that's not itself a particularly useful prism on stress today. Independent of the specific circumstance around Lehman, the people who are funding tri-party balance sheets, for better or worse, tell anybody who listens that they're doing so significantly because of the existence of this facility as a backstop. So the use is not a very good measure of stress probably because of the stigma around it and because we're affecting prices anyway by the existence of these facilities.

We're doing as much as we can to improve the odds that these firms get to the point at which, in the eyes of their short-term secured or unsecured creditors, they look as though they can withstand a pretty large shock in the future without recourse to our facilities. But I don't think we're at the point yet where we can say that confidently, not because they haven't deleveraged sufficiently or bought enough liquidity—though there's a bit of that still left—but because there's so much uncertainty left still about the scale of pressure on balance sheets, what that might do to the losses, what that might do to asset prices going forward or to behavior. So this is just one man's view, but I think a very good, substantive case based on what you can observe and what people say about behavior suggests that circumstances are still so fragile that we could justify the provision of these facilities as a responsible, sensible act given our broader objectives.

CHAIRMAN BERNANKE. Did you complete your questions?

MR. KOHN. Yes, I did.

CHAIRMAN BERNANKE. President Rosengren.

MR. ROSENGREN. I just have a couple of questions of fact. How big was Bear Stearns's tri-party repo on the Thursday that they started getting into trouble—just to give a rough sense of scale? I know it's not exact.

MR. ANGULO. About $150 billion.

MR. ROSENGREN. About $150 billion?

MR. LACKER. That Thursday?

MR. DUDLEY. It was a little over $100 billion.

MR. LACKER. It hadn't run off that week?

MR. DUDLEY. It was starting to run off.

MR. ROSENGREN. Okay. So roughly $100 billion. The numbers seemed to be in that range. Now, one of the reasons that we're worried about the tri-party repo was that the securities in that tri-party repo were very illiquid. Was Bear Stearns unusual in the amount of illiquid securities that were being financed? As we look down this list, is the nature of the tri-party repo across these different parties similar or different? You could have a tri-party repo with collateral that would be easy to liquidate, or you could have a tri-party repo with something very difficult so that the counterparty would have a difficult time actually selling it into a distressed market. From the work you all have been doing, are there big differences or not?

MR. ANGULO. There are definite differences among dealers. I don't have the Bear Stearns cut, but we did a cut recently, and there are very clearly differences among dealers. As we know, the share of less liquid assets being financed by tri-party has been growing over the last—

pick a number—five, seven years. The trend line is going like that, clearly at a steeper or more pronounced rate than the growth in more liquid or more eligible collateral.

MR. PLOSSER. So—I'm sorry—what percentage would that be? When you say it's growing, is it now 10, 20, 50, or 80 percent?

MR. ANGULO. Pat, do you have that?

MR. PARKINSON. I have in front of me data from Bank of New York, which facilitates about two-thirds of the repos. At Bank of New York, 18 percent of the collateral is debt that's settled through DTC—so that would be non-government, non-agency debt—and another 6 percent is equity. So about 25 percent is non-OMO things. The biggest chunk by far is agency MBS. Of course, I think in extremis Bear was having trouble financing even agency debt, importantly given the illiquidity that had developed in even the agency debt markets at that time, which was the critical thing that made investors no longer willing to provide financing for that kind of collateral with a shaky counterparty.

MR. ROSENGREN. For Bear Stearns, we have one side of the transaction looking at the investment banks. On the other side of that transaction, you have companies like Fidelity, Schwab, and Federated. So as we think about who poses systemic risk, we probably want to think about both sides. In terms of a distress scenario, you have tri-party repos that are very illiquid. The clearing bank does not want to provide the cash. As a result they have to liquidate, and you have companies like Fidelity, Schwab, and Federated having to break the buck, and they don't have much capital to infuse. So just as we think about systemic risk, as you're looking at these other organizations, are there other people that you would add to that? I know for Bear Stearns that Fidelity, Schwab, and Federated played a very large role. Were there other organizations that we ought to be thinking about that would have the same kind of nature?

MR. PARKINSON. Well, the other big category that we have been able to identify of entities that are providing tri-party financing is the custodian banks that act as agents for securities lenders. When someone lends out securities, they often take in cash collateral. Then they want to reinvest that collateral, and the big bank custodians do that on their behalf and invest a portion of that cash in tri-party. Interestingly, JPMorgan Chase and Bank of New York Mellon are two of the big banks involved in that particular business. So that's another category.

I think maybe what you're getting at is about dealing with the issues of the tri-party market per se. We have to be very careful in our approach to these issues because the situation is still very fragile, and until we get out of this period of turmoil, we first want to do no harm there. But any solution can't be focused solely or even primarily on the clearing banks and the way they process these transactions, although that's part of it. It also has to focus on the behavior of the borrowers and the lenders, and the borrowers are basically all of these primary dealers and certain other big broker-dealers. The lenders are more diverse, which makes them more difficult to deal with. But I think there are certainly questions about whether they're managing their risks effectively. If you're a money fund and you're treating an overnight repo secured by illiquid collateral as the equivalent of an overnight Treasury bill, there's something problematic about that in terms of your own thinking about the situation you'd be in if, in fact, the borrower were unable to repay.

MR. ROSENGREN. One last question. Sorry for so many questions. The situation of Lehman was kind of interesting because you saw their stock price go down. Talking to financial institutions, both regulated and unregulated, in Boston, a lot of people were evaluating counterparty risk and deciding whether or not they were going to start running before the capital issue. Did your measures of liquidity pick up the amount of stress that was going on in the counterparty analysis being done, I assume, all over the country? One of the conditions for an institution's access to the discount window at a primary credit rate is that it not be rated a 4 or a 5. I know we're not doing bank exams, and I know we're not looking at all the elements of the bank exam. How confident are we, if we were to do something like that for Lehman or for Merrill Lynch, that we wouldn't rate them a 4 or a 5?

MR. ANGULO. On the first question, yes, we were picking up the pressures on liquidity. We saw some cracking, but it never broke. There were some counterparties that were skittish, but we never saw the type of accelerated withdrawals or running that came to mark Bear Stearns. We were watching it very closely, and so were they. But basically it hung together. The second question is a very difficult one. It goes back to the point I finished on, that we are somewhat vulnerable in making these assessments without having a more robust process. One way to look at it in the near term, though—again, as best we can, looking at capital—is the chart on page 6. If you look at Lehman—with its capital raise, their tier 1 risk-based capital would be 12.5 percent. There may be some range around that. There are certainly questions about how accurately Bear's capital was stated. But as a rough measure, I think it would be difficult to say that Lehman would be a 4 or a 5, looking at it from a solvency perspective. They've bolstered liquidity. As I said, it started to crack, but it never really shattered.

CHAIRMAN BERNANKE. Governor Warsh, did you have a question?

MR. WARSH. Not a question, just for the go-round.

CHAIRMAN BERNANKE. Why don't we then have an opportunity for general comments on these issues. Let me just give a bit of context. When we instituted the PDCF and the TSLF in March, about the time of the Bear Stearns event, we stipulated that they would be available for up to six months. That date, mid-September, is coming closer. It's my view, and I think others share it, that markets remain fragile, and in the case of Lehman, for example, the existence of the backup was an important support in maintaining the stability of that institution. Therefore, given the state of the markets and given that I think we still face some systemic risks, I am quite inclined at this point to ask the Board to extend the PDCF and the FOMC to extend the TSLF over year-end, which is a difficult period—subject, of course, to the continued finding of unusual and exigent circumstances. If we do that, I would ask the Board to consider that in a Board meeting, and depending on the comments today, if there's sufficient support, I would ask the FOMC to do that in a notation vote later this month.

Now, if we make the announcements that we're going to at least provisionally extend these facilities, I think it's important that we do so in the context of explaining that we have an exit strategy. In particular, we are working to strengthen supervisory oversight, market resilience, and the overall regulatory structure so that there is understanding and confidence that we're moving forward in a way that will over time make this unnecessary not only in the short term but in the long term as well.

There are several parts to the plan here. One, as Scott already described, is the memorandum of understanding with the SEC, which will provide the basis for cooperation and collaboration in the medium term for our oversight of the investment banks. Two, working with the SEC, we'd like to push forward along the lines that Art was describing, go beyond where we are now, and begin to establish a set of supervisory expectations regarding what we expect to see for the investment banks and to make sure that we have greater confidence in what we're doing and what they're doing. A third element that I think is important as we go forward is to try to improve the financial infrastructure in a number of dimensions. A lot of this work is already taking place at the Federal Reserve Bank of New York, working with other regulators and with the private sector. It includes things like improving the clearing and settlement process for various kinds of derivatives and improving risk management of derivative positions and counterparty positions, for example. It would be important for us going forward to make sure that major institutions can identify their exposure to a given counterparty through derivatives and other instruments and be able to close out that counterparty in an efficient and effective way. In addition, work is going on here at the Board and in conjunction with New York on the tri-party repo market, trying to think of ways that we can strengthen that—perhaps, for example, by narrowing the range of collateral that is normally accepted and through other steps.

So the way I would envision this proceeding would be—again, with your assent and subject to your comments—that we will announce within the next few days the MOU agreement with the SEC, which I would reemphasize is not tied to the PDCF. That is, we would anticipate that this relationship would continue even should we close those facilities, on the grounds that the moral hazard issue is still there, until such time that there is further resolution by the Congress. Second, I'll be giving a speech at the FDIC on July 8, followed by testimony on regulatory reform on July 10, when Secretary Paulson and I and others will be laying out some broad principles, including some of the issues of infrastructure, and will be discussing some of the longer-term legislative issues—for example, the issue of how we should perhaps normalize or regularize the resolution of a failing systemically important firm and, in so doing, maybe define more strictly what the parameters are for Fed lending and what our responsibility is in this kind of situation.

So to summarize, the MOU is this week. There will be testimony coming up. Presumably after the monetary policy testimony later this month, we would like, conditional on your approval, to announce the extension of these facilities conditional on continuing unusual and exigent circumstances. We would like to package that with a series of announcements concerning investment bank expectations, infrastructure, and as part of this environment as we talk about this in testimony and so on, some of our thoughts about how we might go forward in terms of statutory change in the future. What I'm trying to convey is that, although I think we need to extend these facilities, we should do it in a context of increasing clarity about how we are working to make them less and less necessary in the future. So with that as context, let me just open the floor for any comments that people might have. I have first President Lacker.

MR. LACKER. Thank you, Mr. Chairman. The issues around the liquidity facility and what supervisory apparatus we have wrapped around primary dealers have to do with our having extended our lending reach. I think there's now a substantial gap between our implied lending commitment and the scope of our supervisory authority. Vice Chairman Geithner spoke very eloquently about that earlier this month. I think it's paramount that we close that gap in order to keep borrowers from exploiting the obvious lending commitment and choosing to leave themselves vulnerable to runs and run-like behavior. But this leaves open the question of the extent of our lending reach and how we close that gap, and I think that that's the most critical challenge for us in the year ahead, particularly as we approach negotiations with the Congress.

I'd like to share a couple of thoughts on that broader question because the questions posed to us sort of get at those. It's important to start this from a peacetime perspective, sort of a timeless perspective, and ask the question as if you were choosing afresh a lending and regulatory policy that was going to last a long time. If you imagine for the moment that whatever we announce and adopt would be perfectly credible and immediately viewed as credible, I think you'd obviously choose to not have this gap. You'd obviously choose to have lending and regulatory policies that are mutually incentive compatible. So you'd want an adequate supervisory regime in place for any institution that market participants believe we'll lend to. Conversely, it means that you would want market participants to believe that we will constrain our lending to those institutions for which we have an adequate supervisory regime in place.

So then the question comes up: How do you choose the boundaries of our lending commitment? I take it as self-evident that our lending commitment shouldn't be open-ended and unlimited. We don't want to supervise every financial intermediary in the world or in the United States, much less all individuals, partnerships, and corporations. But even limiting ourselves to what's called systemically important financial institutions is going to be problematic as well. I take that phrase to mean any institution whose failure could be costly or disruptive to many other market participants. Any institution that chooses to engage in maturity transformation to some extent faces the potential for run-like behavior by the creditors. Unless we impose draconian regulations, market participants will always have a virtually unlimited capacity for creating financial arrangements that run the risk of disruptive failures. So extending our lending reach to whatever institution that makes itself systemically important just leads us down a path of ever more financial regulation of an ever larger portion of the financial system. I think we're going to have to set some boundaries. I'd like to see them tighter rather than looser, and making them credible is going to be the hard problem for us going forward.

In doing that, we're going to face a classic time-consistency problem. I take that as given. I'm not sure everyone else shares that view, but I take it as obvious. Inevitably the exigencies of crisis management are excruciating, but I think there are times when they conflict with our long-run interest in the type of financial system that we would design from a peacetime, timeless perspective, just the way short-run concerns about growth sometimes conflict with our long-run interest in price stability. But just as sustaining monetary policy credibility sometimes requires resisting the temptation to ease policy to stimulate growth, sustaining credible lending limits is going to sometimes require not preventing a disruptive failure of an institution and not ameliorating the cost of financial distress. To put it another way, I think it would be a mistake to adapt our supervisory reach to a purely discretionary lending policy. We're going to have to choose a policy and commit to it and then take hard actions to make that credible.

From this point of view, I have a deep question about the questions posed by the staff. They focus entirely on primary dealers, and it doesn't strike me that the fact that Bear Stearns was a primary dealer was what made us lend. It was the fact that it was more disruptive. I think it's likely that any other institution that presents the same threat of a disorderly resolution is going to be perceived as benefiting from our implicit lending support, whether or not they're a primary dealer, unless we say something otherwise, unless we draw a boundary, and unless we make that credible. So, for example, other large broker-dealers, hedge funds, private equity firms, or insurance companies could easily fail in a disruptive way. We need to think through whether we're going to let that happen or whether we're going to be forced to step in. At some point we're going to have to choose to let something disruptive happen.

I think that ambiguity about our lending limits would be a bad choice. Market participants are going to form their own views about the likelihood of us lending. Any lack of clarity about the boundaries is just going to lead some firms to test the boundaries, and it's not going to help us resist the temptation to lend beyond the boundaries we want to establish. Besides, Mr. Chairman, you've emphasized the value of de-personalizing and institutionalizing the conduct of monetary policy. It's important that we strive for lending policy that isn't critically dependent on particular officeholders. As I said, I'd favor fairly tight limits on our lending commitments, and you are probably not surprised about that. I think we really ought to maintain this section 13(3) hurdle at a fairly high level, but the exit strategy makes me nervous. Crafting this MOU, a permanent shift in our visibility into and in our ability to protect the system from primary dealers, is just going to sustain the expectations that have arisen since Bear—which have been described and referenced a couple of times and which you see in the fall in CDS spreads for those institutions—and it is just really hard to see how to put that genie back in the bottle and limit the extent to which we're viewed as backstopping them. But I think we ought to strive to make that somehow be viewed as unusual as possible.

More broadly, my reading of the history of economics and financial intermediation is just my reading. But I'm motivated broadly by the sense that we'd be better served in the long run with as small an extent of central bank lending commitment as possible. Central bank credit is fiscal policy. It entangles us in politics. It risks compromising the independence of our monetary policy. You've heard me say this before. Expanding our lending forces us to extend our regulatory reach, and that can't be good for the financial system even though I trust our staff to do a very good job of being as efficient and effective as they can be. I've argued this before. It's not obvious on the evidence that our financial system is terribly fragile apart from the volatility induced by uncertainties about government and central bank policies. Besides, I think that we should take seriously the notion that some amount of financial instability is undoubtedly optimal, as work by economists such as Allen and Gale has demonstrated. Those are the kinds of considerations that I think ought to guide our policy.

Finally, Mr. Chairman, a word about process. At our last meeting we discussed interest on reserves, a historic and consequential decision for us. We had a briefing package of 100-plus pages reflecting substantial staff work. The Committee very much benefited from that. At an upcoming meeting we're going to talk about inflation dynamics, another consequential topic. We've received somewhat less material, even going back several months, about financial markets, their character, and the welfare economics of our interventions. I'd urge you to consider a special topic at some future meeting at which we explore the economics of financial stability, since it is becoming such a consequential part of what we do. Related to that, I was happy to learn from Art that an after-action review by the SEC was under way. Because our role is different from the SEC's, I'd like to suggest that maybe building on that or maybe in parallel to that we conduct our own after-action review of the factors that went into how that event played out. Thank you very much, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. I agree with you that we need to define limits, but I think we have stronger tools than just our declarations of piety. I would just note that there are models. One good model is the FDICIA model, for example, which lays out a whole set of criteria under which intervention can be taken and, if intervention is taken, has a set of rules. There are ways through the legal structure to solve some of these problems without our necessarily having to make time-inconsistent promises.

MR. LACKER. I agree, and those are mechanisms for legislatively tying our hands, and that ought to be high on the agenda.

CHAIRMAN BERNANKE. We'll discuss those. Yes, President Plosser.

MR. PLOSSER. On that point, I have been reading a bit recently. It might be useful in thinking about some of these issues about how we tie our hands and the mechanism for doing that. The IMF went through an extraordinary study effort during the sovereign debt crisis and came up with some very important mechanisms for how to change the contracts that were being written by sovereign countries so as to avoid the IMF's having to step in and look for other solutions, which is, I think, along the same lines. I don't know whether or not there are things from which to learn in parallel with that to think about how we approach that issue.

CHAIRMAN BERNANKE. President Rosengren.

MR. ROSENGREN. I have three comments for the long term and three comments for the short term. For the long term, in the tradeoff between focusing on markets versus institutions, to the extent that we can have standardized products traded on exchanges, we don't need to spend as much time with institutions, and that takes care of a lot of the counterparty risk. To the extent that the products have to be customized and done in dealer markets, then we have counterparty risk and that becomes an issue. So I applaud what the New York Fed is doing with the credit default swap market in thinking about a way to more systematically reduce counterparty risk. I wonder if we should more forcefully be trying to push it not only to a clearinghouse but also maybe to exchange traded. I know there is a tradeoff between standardized products and nonstandardized products. But if we can get things to be more standard so that they can trade on an exchange, we won't have to spend as much time talking about some of the issues that we've been talking about. Not just a credit default swap market has that characteristic. So if we can push a number of areas in which there's counterparty risk into an exchange, then we can get out of the business of focusing on all the institutions.

The second point is that there's a broader role for us as a holding company supervisor. When I look at this list and look at Countrywide, it's not because they're a primary dealer that I would be focused on them. It's because they were 20 to 25 percent of the residential mortgage market; they were a very large player. The OTS has holding company supervision over them. We ought to ask ourselves whether now is the time to think about what organizations we ought to have holding company responsibility for. The OTS has WaMu and had Countrywide. We ought to give some thought to that. Now is the time to think about whether or not that's appropriate and push for it if there are going to be legislative recommendations. In terms of broker-dealers, I think the same thing applies. I don't think that we should be the primary regulator for these organizations. But if we're going to be lending to them in exigent circumstances, having holding company regulatory authority does become important.

The third point is that, when you look at this list, there are a lot of foreign institutions. One insight that we've gotten is that an organization as big as UBS could potentially fail. That may not be something that we thought was very likely nine months ago, but it is obviously more likely now than we would have anticipated. Foreign organizations can either establish themselves as a branch or have a domestic holding company. To the extent that foreign supervisors decide to wall off their organizations around their geographic borders and say that, if there is a problem, we're not going to support institutions that are in the United States and you're on your own, I think we need to revisit some of our rules on how much capital we expect foreign holding companies that are intermediary holding companies to hold. We might also want to think about, if there's a lot of activity being done through a branch that has no capital supporting it, how concerned we should be about that. Should we be taking actions to make sure that, if the foreign parent decides that they are going to abandon the branch, we feel very comfortable with that outcome? Given the list of the primary dealers, I think the numbers are fairly large, larger than they were for Bear Stearns, and that's something that we probably should give a bit more thought to.

On the short-term issues, I certainly think that we should extend the facilities past the end of the year. That makes perfect sense. A number of us have made the point that the markets are still fragile. Just the announcements about Lehman Brothers over the last month highlight that we're not yet safe, and I think that it makes perfect sense to extend through the end of the year because there could be an end-of-the-year financing problem this year. Second, narrowing tri-party repo collateral also makes sense. But it has implications for what securities people hold, and some of those markets may become much more distressed if we announce that they no longer can be part of a tri-party repo. So we need to give some thought to whether there will be collateral damage and to the unintended consequences from that. Third, I agree with President Lacker that primary dealers wouldn't be where I'd focus. I'd focus on systemically important. That would be key players and key markets whose failure might cause a cascading of counterparty failures. I think we ought to start with that premise and which organizations fit into that category. Some of them will be on the primary dealer list, but they are on the primary dealer list for a reason very different from the reason they are systemically important. So maybe distinguishing between those two would be useful.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Mr. Chairman, on the short term, I think extending through the end of the year is prudent and would support that. I would say that the possibility of its naturally dying off would be ideal. I would support that because it is "exigent circumstances." We should make that clear and work these people out of it as quickly as possible.

On the longer-term issues, I share the view of a lot of what President Lacker said. A couple of things: I'm very uneasy about extending our lending and supervisory authority to these institutions on the basis of systemic risk. The banking industry has been under our umbrella, importantly around transactions activities—that is, payments—and how important they are systemically. It's clear, and a line is there. Beyond that, it is size that's systemically important. If we extend this and institutionalize it because we've had this emergency and we've used section 13(3), then I have to ask what will happen when the next Long-Term Capital occurs that's larger, more complicated, with a lot more interaction that will affect the markets globally. What will we do? To what then will we extend ourselves in terms of supervisory oversight, memos of understanding, agreements for the group of hedge funds that aren't regulated, and so forth. So I think it's important that we focus on the fact that this is an emergency and that we go back to "exigent circumstances" in the future for these institutions so that we have clear boundaries on that. I think it has served us well and will continue to serve us well. Then we use our best judgment in exigent circumstances and very sparingly. I think that's a lot of what President Lacker said, so I won't repeat everything else, but those are the concerns that I really do have going forward.

CHAIRMAN BERNANKE. Thank you.

VICE CHAIRMAN GEITHNER. May I make a suggestion?

CHAIRMAN BERNANKE. A suggestion?

VICE CHAIRMAN GEITHNER. Yes. You know, these are deep, consequential questions we face. This is a question on the economy, and we're not going to resolve it today. I think it's important that we recognize that we're going to have to build some time into our agenda—later this year probably, certainly early next year—and get deeper into the basic question about what we are for in the future. What amendments to the Federal Reserve Act, if any, would we support? What would we resist? What mix of these things? That's important because we're not going to do an adequate job of getting ourselves on the table on those actions today. We are going to need to be very careful that the stuff we're doing in the here and now doesn't prejudice those decisions long term. Again, I think the package that the Chairman laid out and the strategy we have are pretty carefully designed to mitigate that risk. We're trying to be very careful that we're preserving full optionality, once we get through this particular period, to go on any of the paths that are ahead in this context. Of course, this short-term stuff is vulnerable to the risk. It looks as though we're prejudicing some of those choices, but I think we're trying to be careful not to do that. I just wanted to make the point that we're all going to need a little time to think through this stuff, and we're going to need some time to come back and talk about the deeper policy questions that we face in this because they are very consequential. I have a lot of sympathy for all the concerns that are on the other side of where we are today.

MR. HOENIG. I would very much like to see us make that happen sooner rather than later just because of the force of events taking us forward.

CHAIRMAN BERNANKE. That’s right. Because of testimonies and so on, we are going to have to at least enunciate some broad principles, and that is why this discussion is very useful. Obviously, details will be worked out over a longer period. President Bullard.

MR. BULLARD. Yes, I just have a few comments. In reading through this memo and hearing the presentation this morning, I think that these are fantastic questions. They deserve a lot of research and analysis. Just to echo Vice Chairman Geithner, they cannot easily be answered in a forum like this one. What is happening is that we start out looking at these questions, which just spawn more and more questions; so we end up with an even longer list of questions. The short-term strategy seems perfectly reasonable, somehow tied to an exit strategy maybe next year. So I didn’t have any problems with that as outlined by the Chairman.

When we get down to approaching a more detailed analysis of what we want to do overall, it brings up very difficult questions of what the optimal regulatory environment is. I think that we all think the regulatory environment in the United States is not optimal right now. Also, in a world of increasing globalization, it is not so clear how you should set up your regulatory structure. This is a once-in-a-generation chance to possibly reformulate the regulatory structure. I wouldn’t hold my breath on that. I think the Congress does not have a great record of dealing with issues like this. These issues are complicated, and it is very hard to get agreement on them. But you would like to have a benchmark. I think that one is out there in the economics literature about what that environment should look like. That is what we could possibly work on over the next nine months or so.

Then I have another comment. When we are evaluating these programs, we have to think about whether these programs have been effective and to what extent. How do we measure success? One of the comments earlier was that the mere existence of the programs might be success in some sense. In a model, that is going to work. Even if you take it out of existence, because the market knows it's there and you can put it back into existence in the future, it will have exactly the same effect. Whether or not you have the program in place, the equilibrium is going to be the same in a lot of models, so the effects would still be there. If it is just the potential of putting the program in place that is considered successful, then maybe it is not critical whether it is in place but priced not to be used or whether it is actually taken out of existence temporarily.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. Mr. Chairman, I am in favor of keeping these facilities open through year-end as you have suggested. I think that just the existence of the PDCF is important, which we talked about earlier, and your overall outline of an approach, the topography of that approach, is attractive. The question I have is about—and you used the term—"supervisory expectations." I have a question for Scott, and then a thought to follow up on. Since, Scott, no one asked you a question, I want to ask you a question.

MR. ALVAREZ. I was perfectly content to get through this without any questions. [Laughter] But I am happy to answer anything.

MR. FISHER. In working up this MOU, have you had any interaction with Chairman Frank or any of his staff, getting a sense of how they might react or what it does in terms of their own expectations?

MR. ALVAREZ. Well, we have had a bit of interaction on the Senate side. The Senate folks are very interested in what we are doing and whether this would preempt a congressional action. Chairman Frank has been more sanguine about our doing what is appropriate to deal with the situation now—Laricke may speak to this more at the lunchtime conversation. But we are building on existing authority. We are not expanding beyond the existing framework. We are agreeing to collaborate more, work together more, but we don't gain any legal or statutory authority through this MOU. We gain some admission because we are standing next to the SEC. We expect that the primary dealers and CSEs will be more willing to talk with us because we are with the SEC. But in the end, it depends on voluntary cooperation by all.

MR. FISHER. Are you picking up any signals in return, in this interaction with the Senate or elsewhere, about what they might be thinking? Are we picking up any other signals that might be of concern?

MR. ALVAREZ. On the House side, Chairman Frank is thinking of a model that is similar to what the Treasury blueprint outlined, where the Federal Reserve would be a systemic regulator and have some authorities that go along with that. I think that on the Senate side they are very much in disarray. They want to visit this issue, but they haven't figured out exactly what point of view they want to have.

MR. FISHER. I am a little confused. You testify in July and then have a speech. You said that you and Paulson will be speaking. I think that is a very important point. It is going to be a tough act because you don't want to take anything off the table, but you want to keep a lot open and not show your hand. Well, we don't know what our hand is yet. You may, but I don't think we have it as a group. So we can't really show our hand. Anyway, I don't know how this is going to be prepared, but I'm sure there are lots of feelings around this table. This is the substance that Vice Chairman Geithner referred to earlier—these very, very important questions. But you are going to have to show some leg during that speech. Obviously, this is a Board issue, but with regard to the FOMC, I would just ask that it be fairly carefully vetted.

CHAIRMAN BERNANKE. I was planning to do that.

MR. FISHER. Yes, sir. Just for some suggestions, for whatever they're worth. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Stern.

MR. STERN. Thank you, Mr. Chairman. Just a few points. With regard to the short-term plan of extending the facilities over the turn of the year and so forth—that is, the MOU and the testimony that goes with it—that is all fine with me. I don't have any problem with that. That sounds sensible under the circumstances.

A number of important points have already been raised. I won't reiterate all of them. Maybe the one that caught my attention most completely was President Lacker's point about credibility. Whatever we go forward with obviously has to be seen as credible, and as he pointed out, it is important that at some point, to limit our involvement in supporting institutions and markets going forward, we may have to be prepared to let one large institution fail. The reason, of course, that we are very concerned about protecting them over time is the spillover effect. As I have said many times before, where we need to concentrate our efforts—not necessarily exclusively, but certainly in part—is in devising ways to limit spillovers. That is all about preparation—the analysis and so forth that goes with it—and it is all about communication—that is, putting uninsured creditors on notice that the regime is in fact in the process of changing.

Now, having said that, I don't mean to suggest that it is easy. I don't mean to suggest that we will get it 100 percent correct. But if we don't do those kinds of things, then statements about boundaries aren't likely to be credible. They are just going to be, well, you guys wish it were this way, but you have section 13(3), and we know it's there, and we are going to act accordingly. So I think it is very important, as we go forward with this, that we focus some attention exactly on those areas.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. I will be very brief, Mr. Chairman. I do want to say, with respect to the short-term issues, that I fully support the plan that you laid out. I certainly favor keeping these facilities in place beyond September. Even if their use diminishes, I agree with the point that it doesn't necessarily indicate that they are not playing a tremendously important role. The ramping up of our oversight of these institutions in the agreement with the SEC is a very important part of continuing these facilities.

On the long-run issues, it is a wonderful list of questions. I don't know the answers to the questions. I think we really need to dig in very rapidly and do serious work on them. They are fundamental. President Rosengren raised a list of issues about this, the same ones that have been very much in my mind. What institutions? It is not obvious to me that the right list of systemically important institutions is the primary dealers. I think someone—maybe President Rosengren—raised the issue of Countrywide, a huge mortgage company. I certainly worried last summer that it had created systemic risk, and it is not just the primary dealer there. I also think there is an issue with respect to hedge funds, similar to those that arose with Long-Term Capital

Management. This raises very troubling issues to me about our trying to identify and take on supervision of all systemically important institutions. This is a very tough issue that I don't know the answer to.

But also, what is going on raises fundamental issues about how we conduct consolidated supervision. Even if all the systemically important institutions were primary dealers or mortgage companies within bank holding companies that currently we do have umbrella supervision over, I am not at all convinced that the way we are carrying out supervision now would have prevented a Bear Stearns-type of episode within an institution that is currently solidly under our supervision. Last summer I was pleased in some ways that we had lost direct supervision of Countrywide to the OTS. But it might well have been in our domain—six months earlier it would have been—and it could have created a systemically important problem if it had failed. So just the nature of how we carry out this Fed-lite approach, is that really the right way? I see us as very focused on process in our supervision of holding companies. We don't do a lot of transaction testing. Obviously, this raises very fundamental issues, even within our existing domain, about how we carry out comprehensive umbrella supervision. I don't have any answers, but we clearly need to get on it quickly.

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. I will be very brief. A lot of my views have been shared already. Just to expand on President Rosengren's comment—how we define the right institutions, the scope of this, I think that some of the questions here are really hard. It is my understanding that the workgroups we talked about last time are going to be working on some of these things, and we need to get those well under way to help us define these problems. On the longer-term problem—Vice Chairman Geithner made this point, and I just want to reiterate it—it is really important in the short run that we not do things that constrain our longer-term options. It is a very slippery slope that the long run ends up being transformed into a series of short-term steps, and by that almost inevitably you end up in places you don't want to be. So I just want to make sure that we stay abreast of that and not let that happen to us—that we find ourselves six months from now in a position where, gee, we wish we hadn't done that. So I just wanted to stress that again.

I'm fine with extending the facilities through the end of the year. I don't have any tremendous problem with that, although I have always been a little puzzled by "unusual and exigent circumstances." What does that really mean? How do we define that? It would be a lot easier for me to think about when to take it off if I knew what the criteria were for putting it on. It would be helpful to me, anyway, if we could work on defining those criteria a little more rigorously. I know there will be judgment involved in that at the end of the day. I don't disagree with that. But it would help us to define what we mean by that because it is going to be really hard to define what we mean by a "systemically important institution." I am not sure I know the answer to that. I think it is a very difficult question. So I am okay on the short run.

I will just reiterate the other point that President Stern made about the issue of credibility and commitment. You know, I have talked a lot about this over the last couple of years regarding monetary policy. It applies equally well in this framework. Figuring out ways to implement our policies, whatever they may be, in both a time-consistent and committed way, and defining those boundaries and how we live up to them, is a really hard problem. But I don't think we can avoid dealing with it, and it is going to be a critical piece of how we think about the longer term. I will just leave it at that.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. I also support extending our lending facilities to get through the year-end funding problems. As many others have already said, I agree that we should undertake an evaluation of the changes to our emergency liquidity facilities. I think it is important that we do it more broadly and that we don't do it in a piecemeal fashion. How the pieces fit together matters greatly. Any extension of Fed authority to provide routine liquidity support beyond insured banks should be something that we consider as part of a comprehensive regulatory and financial safety net reform. My own view may be that I prefer a narrower lending facility than I think was envisioned in some of the documents that we received, but I do think that the top priority is to have a well-thought-out, documented plan for how we move forward. That will help us address some of the moral hazard issues that we have been concerned about. I think it will avoid our having to create any new institutions or new facilities to respond to future crises. I also think it will help better define some of the boundaries. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thanks, Mr. Chairman. I have maybe a variation on Governor Warsh's comment of yesterday: Much has been said by many, so I will try not to take too much time here. I think Vice Chairman Geithner's admonitions are correct, and I certainly support them. I am quite supportive of extending through the year-end, and the short-term plan that the Chairman laid out seems quite sensible to me.

I don't have well-informed or well-thought-out answers to the more detailed questions that were posed in advance of the meeting. I didn't devote the time to study them in any depth. So let me take refuge in some sort of high-level comments. A number of people around the table have been expressing overview types of comments. I see the touchstone of all of this to be our perceived accountability for systemic risk and financial stability. There may be, in the context of legislation, regulation, and so forth, limits to that; but I think that we are largely perceived as the most accountable party. I have to ask myself, Do we have a system today that is aligned with the reality of the financial markets? Or, put in more vernacular terms, do we have the right stuff to do what we need to do to take responsibility as best we can for financial stability? My answer to that is “no.” I don’t think we have the right stuff. I think the answer to that lies in working out the details of what the right stuff is. But the reality is that financial markets are not bank-centric any longer, with the widely discussed shadow banking system, including hedge funds, a complexity that is not going to go away; international integration that is not going to go away; very, let’s just say, compelling economic and financial reasons for off-balance-sheet treatment of various kinds of things; and on and on. We could make a long list of what that reality is. To me, and I have been kind of dwelling on this for some time, that is a reality that is likely to continue. It may take a couple of steps back, but it will continue to develop along certain lines. Do we have a system that is aligned with it? The answer to that is “no.” So if we can take care of the short-term plan and then buy the time over the next several months to hammer out what we think is the best possible thinking opposite that reality, then that is what I believe we need to be doing. So thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. I will also try to be brief, in spite of the large number of questions that were handed out. The short term should be quite easy. On the tactical issues, I agree with the suggestion of extending the facilities through year-end. They seem to have worked well. Also, a number of very interesting and important initiatives are ongoing as well on the CDS over-the-counter market and tri-party repo, and those should help out as well.

On the longer-term issues, I am very happy to hear that you will be giving a speech and testimony on this, and I will be looking forward to how you lay out those issues. Obviously, there are large-scale changes in our regulatory environment that are being contemplated. These happen only every now and then. It is an opportunity to improve or to make a tremendous mistake if we are not very careful. So I think it, obviously, requires a tremendous amount of time.

People have talked about the various issues, so I won't dwell on them. I think there have been a lot of very good comments around the table and speeches that have laid out the important issues that we are facing. One that I am sure we will have to talk a bit more about is that we can't think about this in a static environment. Obviously, the markets are very dynamic. As soon as we lay out a structure that will help out certain types of institutions, then there is going to be an opportunity to arbitrage that. We are presumably talking about reducing earnings of a number of institutions, and so they will be seeking those out. Another way to characterize the big question—it is nothing new—is how we maintain the incentives for market discipline. Many of the comments that President Stern and others made about how we think about preparing for possible resolutions will be very important. So I am looking forward to many more discussions about this. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I think I would just like to dig into some of the comments that President Lockhart and President Evans just made, just for a second, take a step back, and ask why we are here having this conversation. I know the timing is because we have this PDCF, but what happened was that the financial markets evolved in such a way that simply having a liquidity backstop for commercial banks was not sufficient to protect the economy from systemic risk. I myself have been very surprised—I will be very open about this—at the persistence, the extent, the depth, and the spread of this crisis and how long it went and what it covered. Every couple of months, I thought it was about to be over, and then another wave would come. I think that we have learned something about the financial system in the process, and we have learned that the regulatory structure and the liquidity provision structure were not sufficient to give the economy the protection it needed from the new style of financial system. That is really the background of why we are here, not just because we made the loan or we set up the facilities because we thought we needed to do so to protect the system under the circumstances.

I completely support, Mr. Chairman, your suggested path forward for the near-to-intermediate term. I think that is the right way to go. I would say, relative to the two senators that I testified in front of last week, that they were very supportive of the memorandum of understanding between the Fed and the SEC and particularly supportive of the efforts that the Federal Reserve Bank of New York and the other regulators are leading to strengthen the infrastructure of the OTC derivatives markets. We didn't get into tri-party repos, fortunately. But I'm sure they would have been supportive of that, too.

I think everybody has raised very good questions about where, in this new financial system, you draw the boundaries. What do you need to do? There are no easy answers here, and I look forward to coming back to this. My going-in position is that our liquidity facilities outside of commercial banks ought to be available in systemic circumstances, not in just any circumstances, and they ought to be available at this point to just broker-dealers or investment banks. I would hesitate to get outside that realm. Those guys are already regulated, and so what we're talking about is strengthening the regulation. I think that we can strengthen the core of the system to make it resilient to things happening outside, but I am not totally dug in on that. So I look forward to more discussion. It is going to be very hard to draw the line and make it credible. I agree, partly this will be defining what we mean by “systemic,” but I don’t think we will ever really get to the point of having a bright line around that. It will always need a great amount of judgment, combined with—as you said, Mr. Chairman—a process by which you make that decision, to help limit the moral hazard. Crises are always difficult. You get into a crisis, and the near-term costs are much more palpable than the long-term costs that might be there. So it is always hard to say “no.” We have said “no” in the past on certain circumstances. Drexel is the obvious example. Markets were a little stressed. There was a little disorder. It was fine, but it was a very different circumstance. I think that completes my remarks. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Let me make a few prefatory comments, and then try to answer a couple of the key questions in the memo. First, a crisis is a terrible thing to waste. My sense is that we have an opportunity here to do the right thing over the period to try to get market discipline—to Charlie’s point—back and vibrant and working countercyclically with regulatory discipline and capital standards. So this is an opportunity. As we contemplate our six-months-and-a-day problem, what do we do between September and year-end? I agree with Vice Chairman Geithner’s comment that we need to keep options open, and I will make a proposal in a moment for how to do that.

Second, the memo from the staff said that improvements in financial markets have resulted, importantly, from the availability of the special liquidity facilities, and I agree with that. But I wouldn’t give short shrift to the other things that have been going on in the markets that have improved market functioning. I don't think it is fair to say that we deserve a disproportionate amount of credit for what has happened. We have seen a ton of capital-raising. We have seen a lot of diversification of funding sources. We have seen changes in duration by financial institutions. We have seen improved disclosure and transparency. We have seen big write-downs. We have seen brutal changes in management teams. We have seen pairing of business lines and improved risk management. So it strikes me that market discipline is alive and well. It was necessary for us to do what we did, but I think it hangs way too much on our facilities if we suggest that we are the only thing that is keeping the system together.

As a final prefatory comment, the memo says that some investors have indicated their willingness to lend to primary dealers in recent months, and that has been conditioned on dealers' access to the PDCF. It strikes me that proves too much. I am not sure that is a good thing. The concerns we have late in the cycle, when we look back, include that market discipline broke down. In the short term, obviously, we want to see some of the money market mutual funds from President Rosengren's neck of the woods hang in there with these institutions so we don't have a sort of panic coming. But over the short to medium term, we want the guys in money market mutual funds to recognize that, when they are providing funding overnight, they are making an investment decision that has a risk. So I hesitate to suggest that we want to do things over the period that let them be complacent. We want to do things that make them very focused on the decisions they are making.

Now a bit to the key questions that were asked in the memo. First, on liquidity facilities, on the question of the PDCF and its symmetry with the TSLF, I like that notion of the balance of having an auction and having one that is available more regularly. But we have to recognize that the PDCF, whether intended or not, has been stigmatized. If Lehman Brothers, when they were on their darkest day, had answered the question differently, I dare say they might not be in existence. They were asked, "Have you accessed the PDCF?" The answer was, "Absolutely not." If their answer to that had been "yes," I suspect that they and we could have been in a very different circumstance. So what does that prove? I think that proves that the existence of these facilities matters. It keeps institutions in the game. The particular terms matter less. But also, in extremis, accessing that facility, unlike the securities lending facility, causes losing a considerable amount of control over one's own fate. So I think we have to take that into consideration.

We have considerable leverage over these institutions at this time. No matter what they and their lobbyists say, they want us to be their regulator more than they can possibly contain themselves—mostly for our credibility and mostly for our balance sheet. I worry that if we extend the PDCF as is by just punting it down the road some months, we will lose some of that leverage. So one idea, which I must say I haven't explored as much as I probably should, is extending the PDCF, not as is but by modifying it in a way that would make Bagehot proud—by making it more expensive, by widening the spread. Now, there are other things we could do in this short-term extension that modify its terms—changing collateral or changing haircuts. But it strikes me that price might be an interesting way to say, "Listen, we aren't pre-judging outcomes, but you can see from this move that we aren't comfortable with the status quo, and we are asking ourselves these very hard questions that we brought to bear." That could send an important signal, which I don't think would be overly disruptive to the markets if we explained some of the rationale for doing it.

Let me turn, finally, to the prudential supervision questions. I have a note here in answer to the first question, "How do we limit moral hazard if we continue the facilities?" My bold answer is “carefully,” so I guess not much is there. On what principles should supervisory expectations be based? I think Art talked rightly about these different regulatory frameworks for the big money center commercial banks and the investment banks. We’d be doing ourselves a disservice over the period, Mr. Chairman, to take the regulatory regime that we have now had for a long time for these big complex commercial banks and try to put it on the investment banks. I’ll answer this the way I began. We have an opportunity to start with a blank sheet of paper, with four institutions over the period, and figure out how to be really, really good regulators, building on the lessons that we have learned from our traditional supervision and regulation function. I think that we would be making a mistake by saying, “We have a model, and let’s throw it on these guys.” If we regulate these four institutions the way we have long been regulating commercial banks with the OCC and others, I think we won’t have maximized the best of regulation. The goal would be to figure out how to regulate these four right and then, frankly, to export those lessons to what we have long been doing to make regulation better and stronger across this group. If it turns out that we do to Goldman Sachs and Morgan Stanley what we have been doing to Citi and JPMorgan, as was suggested, we will find other people will be in the business of investment banking, so we won’t have done terribly much to mitigate systemic risk.

Finally, on the question about the role for the Congress. Both in the medium term, Mr. Chairman, in the context of your speeches and as we get toward the end of July, when you announce some modification—if the FOMC agrees—about these facilities and the PDCF, it is very important that the Congress be given serious responsibility for this. It has been very easy for them to criticize, on the one hand, and to whisper to us all their support, on the other. I think they need to be given very important homework assignments in terms of what they can do.

Some form of FDICIA with investment banks might be one example. Wrestling about these issues in terms of regulatory organizations strikes me as very consequential. Even if we could convince ourselves that we have all the regulatory authority to figure this out with our regulators, we would be better off, when we are ready and we have the right answer in our own view, to bring it to the Congress for final clarity and to get their imprimatur. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thank you very much. I agree with a lot of what Governor Warsh said and a lot of what has been said before. Let me just take a slightly different tack answering the question that Governor Kohn raised: Why are we here? Part of that is, because of the Glass-Steagall Act, we have this unusual structure in the United States. Other central banks can provide credit much more easily to a wide variety of institutions. We have a legacy that created this separation, which isn't as strong in most other countries. In continental Europe, for example, you just don't really see this. Then, we have built a regulatory regime that helped to promote that. Remember, the discussions have been about markets and the challenges in the markets. Well, I think our regulatory regime, not just in the United States but throughout the world, helped promote the disintermediation to promote greater reliance on the markets. In certain ways this is a very good thing, but it creates exactly the kinds of problems and challenges that we are facing now.

I think we need to be mindful of that and take that into account when we are thinking about what to do next in dealing with these issues. Thinking about market resiliency and market infrastructure is crucial, but we also have to be mindful that, if we try to get things to migrate to the exchanges, to clearinghouses, et cetera, it is great for us as regulators, and it is also useful because the information is much more centralized. But it also could create market dynamics, as

President Evans said, that could lead to trying to get around that. Then the risky stuff goes OTC. The risky stuff is in new institutions that we haven't thought of yet. President Yellen mentioned some other institutions. We can mention hedge funds and money market mutual funds, but in five years there may be institutions that we haven't even thought about. No matter what structure we set up, there would be ways to try to get around it. So we need to think about a regulatory regime that gets the costs and benefits right to make the different relevant institutions not bridle too much at being part of it and so to rethink the financial holding company structure. If the investment banks had found the financial holding company structure an amenable one, then we wouldn't be here either because we would have solved the Glass-Steagall legacy problem. But we haven't quite done that.

So actually exactly as Governor Warsh was saying—and believe it or not, we didn't coordinate beforehand—I think that we should think about how to revise our general regulatory structure to get more institutions under this umbrella, not have them find it scary, upsetting, or disturbing but to see that we are doing it in a reasonable cost–benefit way. I can see just in all the issues that we have been facing regarding some capital relief in particular circumstances—so-called 23.80 relief on particular types of transactions, issues of what's included in the definition of a leverage ratio. I think it gives us an opportunity to rethink why so many institutions find it onerous and are so lacking in desire to be part of this regime. Obviously, there is some regulatory competition—President Rosengren, I think, brought that up—so we need to think of that as a whole. This is part of the homework assignment that the Congress needs to think about—setting up a reasonable FDICIA-like regime for a broader set of institutions that would choose to come and be regulated by the Fed.

We have been talking about where the bright lines are. But if we okay someone to be a financial holding company, then they become part of our regime in the existing structure. So the lines aren't completely carefully drawn. It really is sort of a cost–benefit analysis if someone chooses to apply. So we need to think about that carefully and about the costs and benefits of getting people in because the long-term dynamics will be that people always try to get away from regulation unless they see that there is some sufficient benefit. Being very mindful of that, both from the institution context and the broader context of the markets, is very important. Thank you.

CHAIRMAN BERNANKE. Thank you.

MR. KROSZNER. Oh, and I apologize—I fully support going ahead with extending the facility past the year-end. I would make sure that it's a bit more than just immediately past year-end and go some time into February so there are no questions about year-end.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. Thank you, Mr. Chairman. I also strongly support the short-term strategy that was laid out by the Chairman. I don't see that we really have an alternative in that context. There are a lot of issues here. The reality is that this is super complex, and we have a lot of work over the next year to be ready for the next Administration, when all these issues are going to become extremely relevant.

In general terms, regarding the long-term issues, although we got here under exigent circumstances, in a financial disruption, we might have gotten here anyway. The reality is that there was a fundamental change in the way the financial system works. When banks are not so dominant, the distinction between investment banks and commercial banks in terms of the way the financial system works is really much less. It would be nice to think that we could limit the kinds of lending facilities that we have so that we didn't have to worry about regulating or supervising other institutions, but I don't think that is realistic. The nature of the changes in the financial system means that we extended the government safety net but it probably would have been extended anyway. It was just unfortunate that it had to happen in such a crisis atmosphere. So I think we have to think very hard about the issue of limiting moral hazard in terms of a much wider range of institutions.

I am very sympathetic to the issues that President Stern raised, which is that we have to think about the kind of things that we have thought about more in terms of the banking industry: How do we actually set things up so that it is easier for firms to fail and not be systemic? There are a smaller number of firms that we actually have to supervise and regulate, and the reality is that we have to think very hard about how we're going to extend regulation and supervision to a wider range of firms. We just can't escape that. It would be nice to say that we could limit it, but we are not going to be able to limit it except to the extent that we can think about some of these issues. But it is going to be a huge issue going forward, and we really have to be ready to deal with the political process.

The way we are proceeding makes a lot of sense. It is not committing us in a way that creates a problem, but we have to be ready when this issue is dealt with. It will be one of the hottest issues that the next Administration and the next Congress will have to deal with. We have to be really on point and to have positions very carefully thought out, not just by the Board but by the entire FOMC and the entire System, so that we can have a unified position to make sure that crazy stuff doesn't happen and that sensible stuff does. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN GEITHNER. I obviously support the strategy laid out. I just want to underscore, particularly in response to Governor Warsh's comments, that this is in effect a conditional extension, in the sense that we are being careful to get ourselves more comfortable with where these four firms in particular are on capital and liquidity before we announce an extension. We are trying to get clarity on the ongoing supervisory relationship with the SEC before we announce an extension. We have already gotten the 18 major dealers in the world to commit themselves to a path to improve the capacity of the OTC derivatives infrastructure to withstand failure before announcing. We have already begun to get the resources held against default risk in the existing central counterparties higher, in satisfaction of President Stern's general admonition that we want the system better able to withstand failure. I think we are just beginning the delicate process of taking some of the air out of the vulnerable tri-party repos before the extension is announced. So, in that sense, we have left ourselves in this strategy that the Chairman laid out with a little less vulnerability to the possible impression that we would just willy-nilly extend with no effort to make the system safer. We are not going to get far enough. We are not going to know what's far enough. But I think we have a credible plan to say, "We took the initiative, even in a moment of incredible delicacy for dealing with the system, to try to get these institutions and the system in a better capacity to withstand the possibility of failure." In that sense it's a defensible and sensible strategy.

I really don't know what the right mix of boundaries is on access to liquidity in normal times and in extremis and what mix of supervisory authority conditions with what type of resolution regime is optimal. I just don't have a sense. I feel as though I know the broad tradeoffs in it, but I don't know what really looks ideal in terms of the mix of those things. You can make a pretty reasonable case for a whole bunch of variance in that mix of things. The complication for us is that we won’t be able to fully control the outcome because it is going to require legislation. Part of the consequence of the system that we live with and part of the reason that we live with the system we have today is that policymakers and regulators don’t fully control the outcome in terms of the incentives created in the legislation for these kinds of things. So it will be difficult for us, but all we can do is focus on the merits, think through those ahead of everybody else, and try to have the best package of suggestions that we can.

But just to come back to what we spent most of the last two days talking about, let’s not lose sight of the fact that we are in the middle of this still. It likely has a long way to go. It is very hard for us to know now what we are going to decide at the end was the most critical source of vulnerability and, therefore, what to do to fix it. We don’t know what the market is going to think the new equilibrium should be in terms of the return on equity across different types of financial institutions and models. Another reason to be careful as we try to contain the risks in this crisis and make the system stronger in the near term is so that we don’t prejudge some of those longer-term questions. Thank you.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. I want to come back to one of Governor Warsh’s comments, just probe it a little further, because I was intrigued by his notion that in some way trying to wean ourselves from this he suggested that we raise the price. It occurred to me in that same context, if we thought that had value in some sense, another way we could do the transition is to cut back either the frequency or the size of the TSLF, as we sort of wean the markets off access. Announcing both those things in advance might have some value to us moving forward. I wanted to hear other people’s thoughts and reactions.

CHAIRMAN BERNANKE. Vice Chairman.

VICE CHAIRMAN GEITHNER. First, I completely agree that, once we get to the point at which we believe the best policy is to dial this stuff back and transition to a world in which they don't exist, we are going to want to look at a whole bunch of things—changing terms, changing the relative attractiveness across the auction facilities, thinking about size, and thinking about price. I think that will be very important to do. It is very unlikely that the optimal path is going to be that there is a cliff—one day they are there, and the next day they aren't. So I completely agree with that.

My own judgment is—but it may not be right, and it could change over time—that for the moment we want to have a clean, crisp signal. Better to say that we are going to extend in the context of these broader initiatives to strengthen the system and not at the same moment alter their terms and relative attractiveness. But we are going to have to think very carefully over the fall, conditions permitting, and well ahead of whatever the new date is, what the desirable exit strategy is in changing incentives around use.

However, my basic sense is not now, not yet, partly because of the complexity of the signal you are sending and the difficulty of how it will be interpreted. We have done all this stuff in part because we are trying to address a complicated mix of things around incentives, stigma, and that kind of thing. It is hard for us to predict what the effect would be. Its purpose is to wean, but to do it now would make the message a bit more complicated. If the world is strong enough that you can wean them now, why are you extending? So my basic sense is, absolutely, we are going to have to figure it out by the transition, not quite yet but well ahead of February 15 or whenever it is going to be.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. Yes. I support Governor Warsh's suggestion for raising the price. It is hard for me to believe that confidence in any of these institutions depends materially on 100 basis points of the price. It is the access, the funding, that they would be able to use to fund withdrawal or flight by somebody. I think it sends the right signal that we view this as exceptional. Conditions are certainly different than they were in March, when we designed and implemented it, and I think they are unlikely in the fall to be anywhere close to where they were on March 16. You might disagree, and we could always change things between now and then. But I like the signal of withdrawing the generosity just a tad.

CHAIRMAN BERNANKE. Remember that we are doing moral suasion as well. I mean, we are not really allowing investment banks to use this as a profit center. So I'm not quite sure what the marginal effect would be on incentives.

MR. LACKER. But this would also place less weight on moral suasion to discourage and would use the price system a bit.

CHAIRMAN BERNANKE. It also might increase the stigma. It is a very complicated calculation.

VICE CHAIRMAN GEITHNER. There are many things that I would love to do. I would like to make them pay for it and say that we are not going to extend it unless they pay for it. I would like to say that we are not going to extend it unless they pre-fund some liquidation facility for one of their little counterparties. There are a million things that I think would be good to do from an incentive angle—but not at the same time that we are trying to maximize the chance that we get through this and have the flexibility to let monetary policy adjust to the changing amounts of risk on the other side of the tail. So there are a million things I think it would be cool to do, and we will have to do them. We will design them really in a clever way once we are at the point where that is optimal, but I just don't think that's now. The risk is that it will undermine what we are trying to achieve with a fleeting "make us feel better" benefit.

CHAIRMAN BERNANKE. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. So just on behalf of the troublemaker caucus, [laughter] let me make a suggestion. It doesn't strike me as though the deltas between Vice Chairman Geithner's formulation and what I proffered are that large. That is, I think we collectively agree that we need, as part of an extension of the facility, to ensure that there is a suite of facilities and self-help efforts—tri-party repos, OTC derivatives, principles by you, and clarity on what the horizon looks like. I guess the only question is, At the time that you solicit the notation vote and announce this—let's say that is the second half of July—how comfortable are we at how that package looks to suggest that we are keeping options open and that the signal we are sending is not that this is a business that we want to stay in forever? Maybe in that context we will see what kind of progress we are making in truth on some of those infrastructure improvements and in the narrative, so that we can revisit—I think maybe with some guidance from Brian, Bill, and the staff—what the incremental benefits are of a modest change to the PDCF in that context. By the second half of July, we might find that we are much more informed so as to weigh the benefits and costs of it.

CHAIRMAN BERNANKE. Bill Dudley, did you have a comment?

MR. DUDLEY. The real issue may be that the PDCF borrowing may be de minimis. In that environment, it's not really clear what raising the price really means. It might even be confusing to people if you raise the price at the time the borrowing was de minimis. So I think that is just one consideration.

CHAIRMAN BERNANKE. Okay. If there are no other pressing comments, thank you very much for this discussion. I heard general support for the short-term strategy, which means, I hope, that if we do come to ask you for an extension of the TSLF we can do it by notation vote without a videoconference meeting, unless things change.

There clearly is a lot of dissatisfaction among all of us about the ad hoc nature of the way we had to deal with the crisis in March. We would all like much more clarity about our authorities, the limit of those authorities, and the match between our responsibilities and our authorities; and, as we go forward, we will try to get clarification on that. At the same time, we also want to take steps to try to increase the resilience of the system and reduce the risk that we will be in the same situation again in the future.

I will try to vet my speech. I don't want to overpromise. It has to be done over the Fourth of July weekend, so I expect everyone to be available 24/7 for commentary. [Laughter] But I will generally be talking about things that we are doing. I will talk only in general terms about some of the principles that we have discussed today about the need for clarification about how to resolve a troubled institution, how to set those limits, and so on. But I will try to circulate that, to the extent that it is feasible.

Let's see, our next meeting is Tuesday, August 5. You are invited to get lunch and come back to the table to hear Laricke Blanchard's update on congressional matters. If you have any revisions to your economic projections, you have until 5:00 p.m. tomorrow to send those in. And I want to thank—I haven't done this—Art, Scott, Pat, and all of their colleagues, who have been working very hard on these issues, for their presentation and their hard work. The meeting is adjourned.

END OF MEETING