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.

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]