

**Meeting of the Federal Open Market Committee on
June 27–28, 2007**

A meeting of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington, D.C., on Wednesday, June 27, 2007, at 2:00 p.m., and continued on Thursday, June 28, 2007, at 9:00 a.m. Those present were the following:

Mr. Bernanke, Chairman
Mr. Geithner, Vice Chairman
Mr. Hoeing
Mr. Kohn
Mr. Kroszner
Ms. Minehan
Mr. Mishkin
Mr. Moskow
Mr. Poole
Mr. Warsh

Mr. Fisher, Ms. Pianalto, and Messrs. Plosser and Stern, Alternate Members of the Federal Open Market Committee

Messrs. Lacker and Lockhart, and Ms. Yellen, Presidents of the Federal Reserve Banks of Richmond, Atlanta, and San Francisco, respectively

Mr. Reinhart, Secretary and Economist
Ms. Smith, Assistant Secretary
Mr. Skidmore, Assistant Secretary
Mr. Alvarez, General Counsel
Ms. Johnson, Economist
Mr. Stockton, Economist

Messrs. Connors, Evans, Fuhrer, Madigan, Rasche, Sellon, Slifman, and Wilcox, Associate Economists

Mr. Dudley, Manager, System Open Market Account

Messrs. Clouse and English, Associate Directors, Division of Monetary Affairs, Board of Governors

Ms. Liang and Mr. Struckmeyer, Associate Directors, Division of Research and Statistics, Board of Governors

Messrs. Leahy and Wascher, Deputy Associate Directors, Divisions of International Finance and Research and Statistics, respectively, Board of Governors

Mr. Dale, Senior Adviser, Division of Monetary Affairs, Board of Governors

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

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

Mr. Small, Project Manager, Division of Monetary Affairs, Board of Governors

Mr. Ahmed² and Ms. Kusko,² Senior Economists, Divisions of International Finance and Research and Statistics, respectively, Board of Governors

Mr. Luecke, Senior Financial Analyst, Division of Monetary Affairs, Board of Governors

Ms. Beechey and Mr. Natalucci,² Economists, Division of Monetary Affairs, Board of Governors

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

Mr. Moore, First Vice President, Federal Reserve Bank of Cleveland

Mr. Rosenblum, Executive Vice President, Federal Reserve Bank of Dallas

Ms. Mester, Messrs. Sniderman, Weinberg, and Williams, Senior Vice Presidents, Federal Reserve Banks of Philadelphia, Cleveland, Richmond, and San Francisco, respectively

Ms. McLaughlin and Mr. Tallman, Vice Presidents, Federal Reserve Banks of New York and Atlanta, respectively

Ms. McConnell, Assistant Vice President, Federal Reserve Bank of New York

Mr. Weber, Senior Research Officer, Federal Reserve Bank of Minneapolis

¹ Attended portion of the meeting relating to monetary policy communications.

² Attended portion of the meeting relating to the economic outlook and monetary policy discussion.

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June 27, 2007—Afternoon Session

CHAIRMAN BERNANKE. Good afternoon, everyone. Today begins Cathy Minehan's last FOMC meeting. Cathy has been a regular participant since August 1994. We will have an opportunity later in the fall to say goodbye to Cathy more officially, but I think this will be a good opportunity to thank you for your collegiality and for thirteen years of tremendous contributions to the FOMC. Thank you very much. [Applause]

MS. MINEHAN. It has been truly an honor and an incredible experience, something I never expected to happen and a joy through the ups and downs and ins and outs of every meeting. So I thank everybody around the table who has been here and made it that way.

CHAIRMAN BERNANKE. Thank you, and now it is time for the report on desk operations.

MR. DUDLEY.¹ It is hard to follow that. Thank you, Mr. Chairman. Today, I want to focus on the significant rise in long-dated Treasury yields that has occurred since the last FOMC meeting. As you can see in exhibit 1, Treasury yields have moved sharply higher over the past six weeks, although they have recovered a bit in the past few days. At two-year and longer maturities, the shift in the yield curve has been nearly parallel, with yields roughly 50 basis points higher over this period. As can be seen in exhibit 2, the rise in nominal ten-year Treasury yields has been accompanied by a rise in ten-year TIPS yields. Because the rise in nominal yields has been slightly larger than the rise in real yields, forward breakeven inflation rates have risen a bit since the last FOMC meeting. For example, exhibit 3 shows the trajectory of the breakeven inflation rate five to ten years in the future estimated using nominal Treasury and TIPS yields. This measure has risen more than 20 basis points from its trough in May. So how does one explain the rise in nominal and real Treasury yields and the increase in breakeven inflation? In my opinion, there is one very compelling explanation—market participants generally believe that the downside risks to growth have diminished, and this has led to (1) a sharp shift in monetary policy expectations and (2) a modest change in investors' assessment of inflation risk. But other factors

¹ Material used by Mr. Dudley is appended to this transcript (appendix 1).

also played a role, including mortgage convexity hedging and, perhaps, the gradual shift in the appetite of foreign central banks away from U.S. Treasury securities toward other assets.

As shown in exhibit 4, monetary policy expectations as embodied in the Eurodollar futures market have shifted sharply since the last FOMC meeting. In May, a drop of more than 50 basis points in Eurodollar rates was anticipated to occur by the end of 2008. In contrast, currently the Eurodollar futures strip is virtually flat—indicating that market expectations are close to neutral through 2008. This shift in expectations is also evident in responses to our survey of primary dealers. Using exhibits 5 and 6, we can compare the dealers' forecasts before the May 9 meeting with their forecasts before our meeting today. The green circles represent the average forecast of the dealers; the size of the blue circles indicates the frequency of different forecasts; and the horizontal dark lines represent market rates. As can be seen in these exhibits, over the intermeeting period the dealer forecasts have moved upward, but much less than market expectations. This presumably reflects the fact that the market rate represents the mean of potential outcomes whereas the dealer forecasts are modal forecasts. Also, the smaller shift evident in the dealer forecasts may reflect the fact that dealer forecasts tend to lag changes in market expectations when expectations are changing rapidly. As can be seen in these two exhibits, much of the dispersion evident in the forecasts toward lower rates has vanished since the May 9 FOMC meeting, and the skew to the downside has disappeared. Dealers who had forecasted a flat or higher federal funds rate path generally did not alter their forecasts. In contrast, dealers who had earlier anticipated easing have eliminated or dramatically scaled back those expectations. For example, the blue circles evident in exhibit 5 at rates of 3.5 percent and 4.0 percent are not present in exhibit 6.

The dealer forecasts support the notion that expectations are changing mainly because market participants are less worried about downside risks to growth rather than because they think that the growth rate of real GDP will likely be stronger. With the exception of the current quarter, in which GDP forecasts have been revised upward sharply following a very weak first quarter, the real GDP forecasts of dealers have generally not changed materially through 2008. This is illustrated in exhibit 7. Instead, as shown in exhibit 8, dealers are now, collectively, more certain about the growth outlook—in other words, the downside risks to growth have diminished. The reduction in the downside risks to growth may also be important in explaining the modest rise in breakeven inflation measures. If the downside risks to growth have diminished, then a corollary may be that the upside risks to inflation have increased. In that case, investors should show more interest in purchasing inflation protection. The breakeven inflation measure calculated from nominal Treasury and TIPS yields has several components, including expected inflation and the premium paid by investors for inflation protection. In assessing the rise in these breakeven inflation measures due to diminished downside risks to growth, it is unclear how to apportion the rise in the overall breakeven inflation measures between a higher premium for inflation protection and higher expected inflation. In theory at least, reduced

downside risks to growth might reasonably be expected to push both components a bit higher.

Three other factors behind the backup in Treasury yields bear mentioning. First, the shift in monetary policy expectations and the rise in longer-dated yields have been a global phenomenon. When yields are rising elsewhere, that shift should put some upward pressure on U.S. long-term rates. Second, mortgage-related convexity hedging may have exacerbated the speed and magnitude of the rise in yields. A rise in yields causes expected rates of prepayment on lower-coupon fixed-rate mortgages to fall, which lengthens the average duration of mortgage portfolios. Mortgage servicers, the housing-related GSEs, and other mortgage holders respond by selling long-dated Treasury securities and long-dated interest rate swaps to reduce the average duration of their holdings. Exhibit 9 shows that most conventional fixed-rate mortgages are below current mortgage rates. As rates rise, these mortgages get further “out of the money.” This lowers expected prepayment rates and lengthens duration, and people react by hedging. As long-term rates keep rising, the effect of higher interest rates on duration gradually lessens as the rates on most outstanding mortgages fall further below current market rates. The effect of mortgage convexity hedging is evident in the relative underperformance of ten-year Treasuries, which is one of the preferred hedging vehicles versus mortgages, relative to other Treasury maturities. The week ending on June 13 had the biggest rise in longer-term Treasury yields. As shown in exhibit 10, this was also the week in which ten-year Treasury yields rose the most compared with five-year and thirty-year Treasury rates. To the extent that mortgage convexity hedging pushes up nominal ten-year Treasury yields more than other yields, then it may also temporarily distort breakeven inflation measures. Third, diminished appetite among central banks for Treasury securities may have also been a factor behind the rise in longer-dated yields. Central bank buying was often a featured part of the story when bond term premiums were unusually narrow. Foreign central banks may have played a role in the recent rise in bond term premiums. As shown in exhibit 11, the growth rate of Treasury custody holdings at the Federal Reserve Bank of New York has slowed sharply since April. But it is important not to push this point too strongly. Although foreign central banks with the largest foreign exchange reserve holdings are diversifying their portfolios away from Treasuries, they still appear to be extending the average maturity of those Treasuries that they hold, which implies a continued bid for longer-dated Treasuries from this source.

Turning now to other market developments, the most striking aspect of this period of rising Treasury yields has been the limited effect that this rise has had on the risk appetite of investors in most other markets. This is in sharp contrast to the reduction in risk appetites that occurred in a broad array of asset classes in late February and the first half of March. For example, as shown in exhibit 12, the rise in long-term yields has not caused the U.S. equity market to retrench. As shown in exhibit 13, until the past week or so, corporate debt spreads have been relatively stable. Also, in the foreign exchange markets, the carry trade remains alive and well. One way to see this is in exhibit 14, which illustrates the change in the value of the yen against high-

yielding currencies such as the Australian dollar and New Zealand dollar as well as against the U.S. dollar and the euro. As can be seen, in the late February selloff, the yen rallied, and the high-yielding currencies sold off sharply. In contrast, during the recent rise in interest rates, the yen weakened and the high-yielding currencies appreciated. Similarly, as illustrated in exhibit 15, although volatility in the U.S. Treasury market moved up sharply (shown by the rise in the MOVE index), volatility in the equity and foreign exchange markets remained quite low.

In the foreign exchange markets, movements between the major currencies continue to be driven mainly by changes in expected interest rate differentials. Exhibit 16 shows the movement in the spreads between the September 2008 Eurodollar futures yield versus Euribor futures for Europe and Euroyen futures for Japan. As can be seen here, interest rate expectations shifted more sharply upward in the United States relative to Japan than relative to Europe. Not surprisingly, as shown in exhibit 17, the dollar appreciated more sharply against the yen than against the euro over this period. The yen's weakness, which has been persistent but stealthy, may begin to receive more attention. After all, as shown in exhibit 18, while the nominal yen/dollar exchange rate has fluctuated in a relatively narrow range in recent years, the real effective yen exchange rate has declined sharply over this period—a rate of decline that may be intensifying. For example, in May the real effective exchange rate of the yen—as estimated by the BIS—had fallen to its lowest point since the early 1980s and had declined nearly to half of its early 1995 peak. Although the June BIS data are not yet available, the rate of depreciation has likely increased over the past month.

Although calm generally pervades U.S. financial markets, there is one important exception worthy of note. The subprime mortgage space is still very unsettled—hurt both by poor housing market fundamentals and by the problems of two hedge funds sponsored by Bear Stearns. Exhibit 19 shows the behavior of the spread on the ABX 06-2 index, which is an index based on a basket of credit default swaps on underlying cash securities. As can be seen, the spread has increased to a new high, and underlying CDS spreads have also increased. There is a danger that forced liquidation of illiquid subprime-based securities could exacerbate the pressure on this market. However, it should be noted that the Bear Stearns-sponsored hedge funds that are in trouble are not particularly large; the problems of these hedge funds appear to be mostly exceptional rather than the norm; and the counterparty exposures generated by these hedge funds are broadly distributed and have already shrunk sharply in size. That said, there still are risks that forced selling could drive market prices down sharply, leading to lower marks for other portfolios of assets related to subprime mortgages. This, in turn, could lead to margin calls, investor redemptions, and further selling pressure in this market.

In terms of lessons learned, three points come to mind. First, high credit ratings don't fully capture measures of risk. The ratings are based on the risk of default, not the market risks associated with illiquidity. As a result, highly leveraged portfolios of highly rated but illiquid assets are subject to significant market risk that the ratings

may obscure. Second, the performance of some of these complex securities is very sensitive to the correlation of returns. As correlations move higher, the subordination protection offered to senior tranches in complex securities such as CDOs, and CDO-squared products—CDOs of CDOs—can evaporate quickly. Because the ratings for the tranches within such products are typically established on the basis of historical correlations, the default risk for some of these tranches may be understated. Third, marked-to-model asset valuation may artificially smooth returns and obscure risk—both to portfolio managers and to investors.

The health of the broader CDO and CLO (collateralized loan obligation) markets may rest on this same fragile set of assumptions—that credit ratings fairly capture risk and that historical correlation relationships will continue to apply. This implies the potential for problems: If investors questioned these assumptions in the subprime area, they could also rethink their assumptions about these risks in the broader markets. Such a development might lead to considerably less buoyant conditions in the corporate debt and loan markets. It could be noteworthy that some of the indexes that reference credit default swaps in the corporate debt and loan markets have shown some deterioration in the past week.

Finally, 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 May FOMC meeting. Of course, I am very happy to take questions.

CHAIRMAN BERNANKE. On the breakeven inflation rates, the five-by-five rose more, I believe, than either the five or the ten arithmetically because the ten rose more than the five and it's in the spread. It seems odd that a change in the near-term growth outlook would have significant implications for five-to-ten-year inflation expectations. Are there technical issues there as well as in mortgage hedging, or is it just the way you calculate these spreads with the differences in liquidity and so on?

MR. DUDLEY. Well, I think there is an issue. You have to wait for the market to settle down. To the extent that you are taking a snapshot at a time that more convexity hedging is influencing the ten-year and the five-year has not caught up, that can be a phenomenon. Also, people in the marketplace say that people in the nominal Treasury markets are different from the people who invest in TIPS, and so the behavior of the two can diverge for short periods. I would be more confident if a month from now we saw the same

uptick in five to ten years of forward inflation as we do today. I am not convinced it will necessarily persist. It may be that real yields and nominal yields will eventually equilibrate as these two markets come back into balance. So my own view would be that it bears watching, but I wouldn't reach strong conclusions about it at this stage.

CHAIRMAN BERNANKE. Thank you. Are there other questions for Bill?

President Minehan.

MS. MINEHAN. My memory of the Long-Term Capital Management situation was that the dollar amount that went into the original program that the investment banks put together when they started to manage the situation wasn't that much bigger than the money that Bear Stearns is throwing at its hedge funds, yet the effect on the market seems to be very, very different. Having been around during the Long-Term Capital episode, I know that there were real concerns that the domino effect was going to be enormous because of the market uncertainty and the lack of liquidity and so forth across a wide range of instruments. Is it the range or the nature of the instruments? How would you see the two situations and compare them because clearly this one, for all you can read and understand and even in your own presentation, doesn't seem to be that much of a systemic issue.

MR. DUDLEY. Well, I think there's a difference in terms of people's assessment of how much risk Bear Stearns is actually taking on in terms of their hedge fund. My understanding is that they are extending credit, and they are basically taking out the credit that was extended by the counterparties for the less highly leveraged of the two funds. They still have equity. They are hoping that they still have equity—that the assets of the hedge fund are essentially going to exceed the value of the loan that they are making. So they're feeling that, if all goes well, they are not going to be out any money. My memory of Long-

Term Capital Management, and somebody can correct me if I'm wrong, is that the people who came into that pool were putting up equity. So it is quite different in terms of what was actually being contributed in these two cases. Bear Stearns is just replacing the counterparty borrowings with its own line of credit.

MS. MINEHAN. But then they managed it so that they did come out ahead over a period of time—at least that's my memory.

CHAIRMAN BERNANKE. I'm sorry. Is this two-handed?

VICE CHAIRMAN GEITHNER. I was going to follow up on Cathy's point, but I think Don is, too.

MR. KOHN. I was going to do the same.

CHAIRMAN BERNANKE. Governor Kohn.

MR. KOHN. I was just going to remark that the situation was quite different. LTCM followed the Russian debt default. The markets were already in considerable disarray. All those correlations had already begun to turn, and then on top of that you had the fire sale effects of LTCM. You can see some of that in the subprime market, where this thing is concentrated. It is just not spread out now, and the whole market situation was very different at that time.

MR. DUDLEY. I think there is a presumption in the Long-Term Capital Management case that a lot of people had similar positions in place. In the Bear Stearns case, we certainly don't have all the information at this point, but the general thought at this time is that there are not a lot of other people with the same positions in place.

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

VICE CHAIRMAN GEITHNER. I agree with all of that, but the relative size is much smaller—much narrower in the type of positions to which they're exposed. The state of the world is dramatically different. Direct exposure of the counterparties to Bear Stearns is very, very small compared with other things. Bill is exactly right. These guys are making a loan against a set of positions—a right to those positions—not equity, and what they realize in the value of those positions over time will be determined. They think there is positive value in that. So the situation is dramatically different. It does not mean that you should view it as particularly reassuring. You know, these people were exceptionally experienced in the mortgage credit business, and there were smart people in LTCM, too.

[Laughter]

MS. MINEHAN. That was the general opinion.

VICE CHAIRMAN GEITHNER. But these guys were regarded as very smart people, who knew the business well, and this is just a good example of how little one can know in some sense and what leverage does to your exposure to liquidity risk. In this case, people were just not willing to give them the time to realize whatever value might be in these positions, and this is just a natural consequence of leverage. People think they had substantially less leverage than LTCM had in some sense, but that is hard to measure.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. Mr. Chairman, I would argue that there are similarities in that, with Long-Term Capital, most of the stress-testing had been just computer-model driven. Then when actual market prices began to be quoted, you saw the deterioration. That is clearly the case here. The ABX is a technical index. For a lot of the CDO-squared market, nobody knows what the values, as opposed to the prices, really are. There is a difference between

price and value. Price is what you pay; value is what you get. I suppose one charitable interpretation of this, Bill, would be that the good thing about this situation is that we actually may be creating a real market to determine value on these things or at least price relative to value. But I think the phenomena are similar, and I would argue—having been in the business, although the business wasn't as sophisticated when I used to be in it—that this has broader dimensions than those we had before. If you look at the growth rate of these instruments—again, without any underlying sense of what you ultimately can cash in if you're pressed—it has been a straight upcurve. The numbers are quite huge.

Again, I was once a hedge fund manager—I know all the tricks that are played there, including, by the way, the valuation of underlying securities—in a day when the business was less sophisticated than it is now. I don't feel I understand this issue. I don't know about my other colleagues around the table, but you did kindly send someone down to brief our staff on this. They came out with more questions than they did answers, but it was very helpful. I am worried that we will be asked publicly at different intervals and perhaps starting now what our opinions and perspectives are. I'm also worried about giving the wrong answer. I wonder if there is not a way—not during this meeting but at some point—that all the principals at this table can be briefed so that we can understand and have a common approach to this issue. I don't think the issue is contained. I do think there is enormous risk. I hope that something good comes out of this, but speaking personally, I would like to understand this better, and I hope that we all understand it very well in case a negative scenario obtains. That's just a request.

CHAIRMAN BERNANKE. We can monitor the situation here and in New York. I don't know, Vincent, if we have any reports or materials that we can share with President Fisher.

MR. REINHART. Well, Bill and I can get together.

MR. FISHER. Maybe we could just have a common briefing. I think it would be very helpful, Mr. Chairman.

VICE CHAIRMAN GEITHNER. I don't think, Richard, you need to be in a position to offer an opinion on what happened in Bear Stearns in particular. I don't think you need to or want to be in the business of doing that in that particular case. Regarding a broader understanding about the implications of what we see in these markets, Bear Stearns is relevant also in some broader sense. There is obviously value in trying to make sure that people have as much understanding as they can. My suspicion is that you are going to find yourself where most people are on this, which is with some differing mix of unease and reassurance that you're not going to resolve fundamentally until we get through the next period of excitement.

MR. FISHER. Well, again, Tim, I would suggest that we not comment on this. None of us should comment on it. But (1) it would be good to have an understanding, and (2) if it gets worse, more intense, or troublesome, the Committee will have to respond in some way, and it would be nice to at least have a common understanding as we go down this path. That's my suggestion or request.

CHAIRMAN BERNANKE. There are a couple of themes. One is that the subprime problems are still being worked through the financial markets. The second is that

subprime is an example of a broader class of structured products that are difficult to value, and that creates some uncertainty in the markets in periods of stress. President Lacker.

MR. LACKER. I am always in favor of more understanding, but for this Committee, what I know about this now suggests that there isn't any reason for us to be involved. I compliment Vice Chairman Geithner on not serving sandwiches in this case. [Laughter] I agree with Vice Chairman Geithner—there's a certain danger of our commenting on stuff like this and leading people to believe that we feel some responsibility for damping or otherwise minimizing the effects of changes in market prices on the changes in other market prices.

VICE CHAIRMAN GEITHNER. Thank you. We are happy to share all the information we have about the specific case and its broad implications with everybody—in confidence, of course.

CHAIRMAN BERNANKE. Other questions for Bill? If not, I need a motion to ratify domestic operations.

MR. KOHN. So moved.

PARTICIPANT. Second.

CHAIRMAN BERNANKE. Without objection. We will turn now to the economic situation, and we call on David Wilcox.

MR. WILCOX.² Thank you, Mr. Chairman. My colleagues and I will be referring to the packet entitled "Staff Presentation on the Economic Outlook." Your first exhibit summarizes our economic forecast. As shown in the top panels, we have edged up our forecast for the growth of real GDP this year and next. Taken by itself, the increase in interest rates that Bill Dudley mentioned was a negative for our growth outlook, but it was outweighed by a variety of other factors, including the higher stock market, the upward revision to wages and salaries, and the more favorable composition of real growth during the first half of this year. As shown in the middle pair of

² Material used by Mr. Wilcox, Ms. Liang, and Mr. Leahy is appended to this transcript (appendix 2).

panels, we have trimmed our forecast of the unemployment rate—partly in response to the latest readings on this series and partly in light of the slightly stronger outlook for real output—and we now have it ending 2008 just below 5 percent, our estimate of the natural rate. As shown in the bottom right panel, core PCE inflation in the current quarter appears to be running at an annual rate of 1.4 percent, considerably less than the 2.2 percent we expected as of the May Greenbook. However, as I will discuss later in more detail, we have interpreted most of that good news as likely to prove transitory and so have taken down our forecast for core inflation over the projection period only 0.1 percentage point.

Exhibit 2 turns to the market for single-family housing. The yellow stripes in the top left panel mark major downturns in single-family housing starts since 1970. As can be seen in the box to the right, the current contraction now ranks among these major episodes in terms of magnitude. It differs importantly from previous ones, however, in terms of its origins because this one did not result from a round of monetary tightening aimed at taking economic activity down to bring inflation under control. That difference has important implications for the likely contour of the recovery. In earlier episodes, once the desired reduction in inflation appeared to be in train, the policy rate was brought back down and longer-term interest rates often came down as well. But this time, as shown in the middle left panel, with policy assumed to hold at its current position, we are not banking on any reduction in mortgage interest rates from here forward, suggesting that the housing recovery may be more subdued than it often has been in the past. One factor that poses some downside risk is the overhang of unsold homes, shown in the middle right panel. Months' supply remains at a very high level. As we illustrated in one of the alternative simulations in the Greenbook, the contraction in the housing sector could be a good deal deeper than the one in our baseline if builders decide to bring inventories down more quickly. Another factor that will be important in shaping the recovery is the pace of sales, shown in the bottom left panel. In light of the tighter conditions in the subprime loan market and the recent backup in rates, we have sales moving a little lower over the next few months but then stabilizing and beginning to edge up around the turn of the year. The data on both new and existing home sales that were released earlier this week were consistent with our Greenbook forecast. I should also note the situation with regard to the price of single-family housing. As you know, home prices have decelerated greatly, and over the projection period, we have them remaining close to their current levels on a national-average basis. But our ability to judge the alignment of prices with fundamentals is limited, to say the least, and a substantial move downward is certainly possible. The bottom right panel illustrates that risk by presenting the estimated valuation error according to the very simple model that we showed you two years ago in our special presentation on housing. To be sure, other models deliver different answers, but this one judges the misalignment of the price-rent ratio to be historically large. If prices break more sharply

because builders decide to clear out inventories more quickly, construction activity might well recover faster, even as other consumer spending is crimped by the damage to household balance sheets. Which effect would predominate in terms of overall aggregate demand is not entirely clear.

Exhibit 3 focuses on business fixed investment. As shown in the top left panel, sales of medium and heavy trucks have more or less fallen off a cliff thus far this year, reflecting the influence of new EPA regulations that took effect on January 1, and this has been an important factor holding down overall equipment spending. We think that this dynamic should be coming to a close over the next few months and are looking for truck purchases to begin trending up sometime during the second half of this year. As shown in the top right panel, orders and shipments of nondefense capital goods hit an air pocket around the turn of the year, apparently driven down in part by the trials of the motor vehicle and construction industries. However, the orders and shipments data for March and April—the latest that were available to us when we were putting together the Greenbook, encouraged us to think that a rebound of at least modest proportions is in train, and this morning's release came in close to our Greenbook expectations. Moreover, surveys of business conditions, including the two orders-based indexes shown in the middle left panel, suggest that businesses concur that the situation has brightened somewhat in the past few months. As shown in the first line of the middle right panel, we are projecting that, over the next six quarters, equipment investment will post respectable—if unspectacular—increases. Two of the variables conditioning that view appear at the bottom of the page. As shown on the left, we expect real business output to grow a little more slowly over the forecast period than in the preceding few years, suggesting—all else being equal—somewhat more modest growth in investment than in earlier years. Similarly, as shown on the right, we expect the user cost of capital for high-tech equipment, the red line, to continue to decline at about the average pace of the past few years, and we expect the user cost for non-high-tech equipment, the black line, to be about unchanged, much as it has been over the past year and a half. All in all, these factors point to a steady outlook for business investment.

Exhibit 4 takes a slightly longer term perspective on the inflation outlook by comparing our current projection to the one that we had in the January Greenbook—the last time you submitted projections for a Monetary Policy Report. As shown in the top left panel, since January we have revised up our near-term forecast for overall PCE price inflation but not our longer-term outlook. Part of the near-term revision is due to faster food price inflation—the top right panel—which in turn reflects, among other things, the greater pressure that ethanol production has placed not only on the price of corn but also the prices of other foods that are produced using corn as an input, such as beef, dairy, and poultry. By the end of this year, though, we assume that the livestock and poultry sectors have adjusted to the higher level of corn prices, so we have food prices coming back in line with core inflation. Another part

of the upward surprise in overall PCE inflation is due to a steeper climb in consumer energy prices—the middle left panel—reflecting crude oil prices that have been running about \$10 per barrel above our January assumption and refinery outages that have kept utilization below typical levels. But as with food, we have energy price increases moderating greatly over the projection period.

Excluding food and energy—the middle right panel—core PCE price inflation has looked a little tamer thus far this year than we expected in January. Nonetheless, our projection for core inflation next year is unrevised, on net, relative to the January Greenbook. The absence of any net revision since January reflects a mix of considerations. For one thing, not all the news related to inflation has been good; both import and—as I just noted—energy prices have been running higher than we expected and thus have been generating more upward pressure on inflation than we had foreseen. For another, some of the recent good news seems likely to prove relatively short-lived. For example, as shown in the bottom left panel, nonmarket-based prices, which account for about 20 percent of the core index, have been rising less quickly thus far this year than we expected in January. Historically, however, fluctuations in nonmarket prices have not conveyed much information about the future behavior of this series, so we have trimmed our projection for the increase in this component of prices over the second half of this year by only a tenth. As shown to the right, both tenants' rent—the black line—and owners' equivalent rent, or OER—the red line—have decelerated lately but, as shown by the bars at the bottom of the panel, OER has slowed by noticeably more. Historically, differences of this magnitude have not persisted long—see, for example, the bulge that emerged and then disappeared in 2003; moreover, these divergences have tended to be resolved in favor of tenants' rent. Accordingly, we expect the increases in OER over the projection period to look more like the recent increases in tenants' rent rather than the other way around. In the end, these influences happen to roughly offset one another, leaving our core inflation projection for next year unchanged from January.

Exhibit 5 focuses on the recent behavior of inflation expectations and, as noted in the top left panel, asks whether those expectations have moved above levels that were typical from mid-1996 through mid-2004—a period when actual core PCE inflation was mostly between 1 percent and 2 percent. As noted in the last bullet in the box, the answer varies by series. In the next three panels, I use shaded bands to indicate levels of each series that were typical during the eight-year reference period—the darker bands marking the middle 50 percent of the series' observations and the lighter bands marking the middle 80 percent of the observations. As shown in the top right panel, the short-term expectations measure from the Michigan survey of households has indeed been tending to run above the levels that were typical of the earlier period. Roughly, those higher readings seem to reflect the steep climb in

energy prices over the past few years. In contrast, as shown in the middle left panel, longer-term inflation expectations from that survey have remained remarkably stable. They have drifted slightly higher relative to the levels that were typical during the reference period, but even so the latest reading sits just at the edge of its 50 percent band. The middle right panel shows a measure of short-term inflation expectations from the Philadelphia Fed's Survey of Professional Forecasters; the most recent reading on this series is near the center of its 50 percent band. As you know, the measure of ten-year expectations from the SPF, not shown, has mostly been stuck at 2.5 percent since 1998 and was slightly below that in both the first and the second quarters of this year. Unfortunately, the TIPS market is too young to allow an apples-to-apples comparison on the basis used here. On the whole, however, we interpret the evidence as suggesting that inflation expectations have been quite stable recently. We assume that they will remain so over the projection period and thus will not be an important influence on the inflation contour this year and next. The bottom left panel plots our projection of the unemployment rate and our estimate of the NAIRU. We expect the small amount of upward pressure currently being generated from this source to be relieved over the projection period as the unemployment rate drifts up and resource utilization eases. The bottom right panel summarizes our inflation outlook. Relative to the May Greenbook, our forecast for core PCE inflation in 2007 as a whole is down 0.3 percentage point; as I noted earlier, our forecast for the second half of this year and for next year is down only a tenth. Nellie will continue our presentation.

MS. LIANG. The next four exhibits focus on financial conditions in the corporate and household sectors. As shown by the black line in the top left panel of exhibit 6, operating earnings per share for S&P 500 firms for the second quarter are currently forecasted by analysts to be up about 5 percent from a year ago, a deceleration from the 9 percent pace in the first quarter. However, in view of the sparseness of earnings warnings thus far, we expect second-quarter earnings to top analysts' forecasts by a few percentage points. As noted to the right, for the year as a whole, analysts are forecasting 8 percent growth in earnings per share (EPS), not very different from the Blue Chip Consensus and the staff's forecast. For 2008, however, analysts appear to anticipate that EPS growth will pick up to 11 percent, whereas we project that profits will flatten as margins get squeezed by rising unit labor costs. Even adjusting for a typical bias in analysts' views, our outlook is a little more guarded.

The middle panels use analysts' forecasts to assess equity valuations. As shown by the blue line in the left panel, the trend-forward earnings-to-price ratio for S&P 500 firms has stayed near its level of the past several years, and the gap between it and the real Treasury perpetuity yield—the equity premium shown by the shaded area—narrowed a touch in the past few months as yields rose. But the premium remains close to its average of the past twenty years,

suggesting perhaps that investors still are mindful of the risks of investing in equities. However, this caution seems to be less the case for smaller stocks. As shown to the right, a simple metric of valuation—the forward price-earnings ratio—shows that valuations of smaller companies, the red line, are on the high side of their range of the past two decades. Relative to valuations of larger firms, shown by the blue line, small-cap valuations also appear on the high side. As shown by the red line in the bottom left panel, risk spreads for high-yield bonds have fallen on net in recent quarters and currently stand near record lows. To assess the risk premium on high-yield bonds, we subtract from this spread the compensation for expected losses from defaults that would be required by risk-neutral investors. As shown by the black line, expected losses have been low for the past few years, and the risk premium, the gray shaded area, is narrow at about 120 basis points. Low risk spreads and risk premiums may be supported by the exceptional quality of corporate balance sheets. As shown to the right, the ratio of debt to assets for publicly traded speculative-grade firms, the red line, is just off its twenty-year low. The ratio for investment-grade firms, the black line, continues to edge down.

Exhibit 7 examines corporate leverage. Some analysts have expressed concern that low risk spreads are encouraging firms to ramp up debt, which will lead to a sharp deterioration in corporate credit quality in the future. As shown by the green bars in the top left panel, share repurchases have risen sharply since 2003, far outpacing the rise in dividend payments, the blue bars. Cash-financed acquisitions, including leveraged buyouts (LBOs), the yellow bars, have also risen. The table to the right characterizes the effects of large repurchases on leverage in 2005 and 2006. Firms with large repurchases, defined as more than 5 percent of assets, had earnings that equaled 9 percent of assets, row 1, higher than earnings of 6 percent at firms with limited or no repurchases. Row 2 shows that high-repurchase firms boosted their debt ratios 2 percentage points, in contrast to the decrease of 1 percentage point at other firms. Even so, the increase raised the debt ratio to only 22 percent at large-repurchase firms, below the average for other firms. Thus, repurchases to date do not suggest material damage to credit quality and would seem likely to do so going forward only if firms were pressured to continue to pay out cash despite weaker profits.

LBOs tend to involve much more debt than share repurchases, as firms typically have debt-to-asset ratios of more than 65 percent right after an LBO. As shown in the middle left panel, the issuance of speculative-grade bonds for mergers and acquisitions, including LBOs, the dark portion of the bars, has risen notably, and originations of speculative-grade loans for M&A, shown to the right, have shot up. The sharp rise in loans reflects in part greater demand, particularly for collateralized loan obligations (CLOs), by institutional investors, who are estimated to have purchased more than half of these loans last year. One reason for the greater demand could be the relatively attractive risk-return tradeoff of loans relative to bonds, illustrated in the bottom left

panel. Returns on leveraged loans in recent years, the black line, are only modestly lower than returns on high-yield bonds, the red line, but are significantly less volatile. Thus, as noted in the inset box, Sharpe ratios—defined as mean excess returns to standard deviation—are higher for loans than for bonds. We expect that institutional investors will continue to pursue loans until expected returns decline, perhaps through tighter spreads or lower recovery rates on loans. Financial data generally are not available for firms taken private; views of examiners and rating agencies can be used to gauge the effect of LBOs on credit quality. As shown by the black line in the right panel, the most current, and still preliminary, reading on the share of syndicated loans outstanding that were adversely rated shows almost no change from the previous year and remains low. For corporate bonds, the share rated B minus and below, the red line, stayed in its recent range at the end of the first quarter. Although these measures provide a bit of comfort, it may take some years to fully assess whether the operating efficiencies attained through LBOs will be sufficient to cover the higher debt obligations.

Exhibit 8 focuses on household financial conditions. As shown in the top left panel, the ratio of net worth to income is estimated to be up on net through the current quarter, largely on stock market gains. While we expect this ratio to decline in coming quarters as house prices flatten and stock prices advance more slowly, it remains high by historical standards. Moving to the right panel, delinquency rates on consumer loans at banks, auto loans at finance companies, and most mortgages have edged up in recent months but do not suggest signs of stress. Overall, most households appear to be in good financial shape. However, there are strains among some subprime mortgage borrowers. As can be seen in the middle left panel, delinquency rates on subprime adjustable-rate mortgages, the solid red line, have climbed sharply and in April moved up again, while those on other mortgages have remained low. As shown to the right, early-payment delinquency rates—at least three missed payments within six months of origination—on adjustable-rate loans rose further in April, though they remain modest for prime and near-prime types, the blue line. As shown in the bottom left panel, we estimate that new foreclosures were started at an annual rate of 1.3 million in the first quarter. Subprime mortgages, the red bars, accounted for more than half of the starts. As noted to the right, foreclosure starts in states with high unemployment, like Ohio, Michigan, and Indiana, continued at a high rate but were little changed from the fourth quarter. The sharpest increases were in four states—California, Florida, Nevada, and Arizona—accounting for more than the nationwide increase, as house prices in those states decelerated. To predict foreclosure starts, we have developed a model of national rates that regresses state-level rates on house price growth, unemployment, the share of loans that are subprime, interest rates, and other variables. This model predicts that foreclosures will continue to rise and reach a bit more than 1.4 million for 2007 as a whole and 1.5 million in 2008, under the Greenbook assumption that national house prices will be roughly flat this year and next.

There is unusual uncertainty right now about a forecast given the unprecedented reach of the subprime market in recent years. Some sources of that uncertainty are discussed in exhibit 9. The top four panels present information on interest rate resets on subprime adjustable-rate mortgages, based on a very recently acquired dataset of more than 2 million 2/28 and 3/27 loans that were outstanding as of March of this year. As shown in the top left panel, we estimate that as of the end of the first half of this year, 36 percent of the loans have already had their first interest rate reset. Another 25 percent will face their first reset in the second half of this year, and 21 percent will do so in the first half of 2008. Characteristics of interest rate resets for this snapshot of mortgages are noted in the right panel. The data indicate that, for mortgages close to their first reset date, the initial rate averages about 7.35 percent. Most contracts specified the “fully indexed” rate as the six-month LIBOR plus a margin, which averages 6 percent, and most had caps on the size of each adjustment.

The diagram at the middle left presents a progression of interest rates that borrowers about to reset likely will face, based on mortgages that were reset in the past year. As shown by the red line (a slightly stylized version of the actual data, the gray line), the jump in the rate at the first reset date is sizable, almost $2\frac{1}{2}$ percentage points, resulting in a new rate of $9\frac{3}{4}$ percent. The first reset rate almost never jumps to the fully indexed rate, the blue horizontal line, because of the various caps on increases. But rates are subsequently reset every six months, and as shown on the second reset date, the rate rises another 1 percentage point. Our data suggest that a borrower would not reach the fully indexed rate in the original mortgage until twenty-four months after the first reset (not shown). As noted to the right, however, many borrowers historically have refinanced their mortgages before the first reset date or shortly thereafter. In our sample, 25 percent of mortgages had one reset, and only 12 percent had a second reset.

The expected resets in coming months highlight a risk to the outlook for subprime credit quality. Fewer borrowers currently have the ability to refinance because of less home equity accumulation, higher interest rates, and tighter credit conditions. However, many lenders are working with borrowers to modify their loans. In addition, our most recent data indicate that, while credit conditions have tightened, financing remains available. As shown in the bottom left panel, spreads on new subprime MBS issues have eased from their peaks in April, although they have moved up in recent weeks, triggered by concerns related to losses at Bear Stearns’s hedge funds. Subprime mortgage originations, the full height of the bars in the right panel, while down substantially from record highs in late 2005, are not inconsiderable. Moreover, funds appear to have been available both for refinancings, the blue bars, and for home purchases, the green bars. My colleague Mike Leahy will continue.

MR. LEAHY. As you know from the Greenbook, recent news on foreign economic activity has been generally upbeat, supporting our view that growth abroad will continue at a solid pace. The top panel of exhibit 10 shows our weighted average of total foreign GDP growth and our outlook. If our forecast is borne out, foreign growth will soften slightly over the forecast period, to about 3½ percent, which is also our current best guess of the rate of foreign potential growth. As you can see from the chart, rates of growth of 3½ percent (the thin horizontal line) or better are not unprecedented, but a stretch of five consecutive years, like that from 2004 to 2008, would be unusual. The chart also shows foreign growth maintaining most of the momentum it developed over the past couple of years even as U.S. growth has taken a more substantial step down. This is also a bit unusual. However, as shown in the middle left panel, foreign domestic demand gained strength throughout the current expansion, leaving foreign economies less dependent on demand from the United States. Foreign investment spending, in particular, has been picking up. As shown to the right, fixed investment spending as a share of GDP has moved up a couple of percentage points since 2003.

With foreign activity expanding slightly faster than potential, it is not surprising that we are seeing signs in some foreign economies that labor market slack is dwindling. The unemployment rate in Japan, shown in the bottom left panel, is at a nine-year low; in Canada, the rate is at a thirty-year low; and the euro-area rate is also at a multiyear low. Tight labor market conditions are less apparent in emerging-market economies, although we are hearing stories of labor shortages in certain sectors in China, where growth has been extremely rapid.

What is more apparent is that in markets for oil and other primary commodities, shown in the bottom right panel, demand has outstripped available supply, driving prices higher. Supply capacity is expanding, however, and we are projecting, consistent with futures markets, that commodity prices will flatten out by the end of the forecast period. Before they do, our forecast calls for oil prices to rise a bit further over the remainder of 2007 and 2008. Food commodity prices are projected to move slightly higher on average as well, in part as energy-related demand for grains remains strong. If this forecast is realized, oil and energy prices should impart in coming quarters noticeable but only moderate upward pressure on headline consumer price inflation abroad. In part this is because the projected increase in oil prices is relatively modest, at least compared with what we've seen in recent years. In addition, the direct effect of oil prices on consumer prices in many cases is damped by tax structures or more-active government intervention in energy markets.

The top panels of exhibit 11, which examine the pass-through of crude oil prices to gasoline prices, provide some evidence of how such pass-through varies across countries. These panels present local-currency prices of unleaded gasoline and imported crude oil over the past couple of years or so, plotted on a ratio scale so that vertical distances correspond to percent changes in prices. Looking across the panels, you can see that the price of imported crude oil in local currency—the black line at

the bottom of each panel—moves similarly across countries. In contrast, the prices that consumers pay at the pump—the red lines—are less volatile in the foreign economies shown than in the United States and have moved up more slowly. In part, this reflects some differing movements in refinery and distribution margins, which are represented by the gap between imported crude oil prices and retail gasoline prices excluding taxes (the blue lines). This is most noticeable for Japan, where margins are proportionally higher and more of the increase in crude oil prices was absorbed than in the United States and the other countries. In addition, higher gasoline taxes abroad have inserted a greater wedge between the pre-tax price and the retail price of gasoline—the difference between the blue and the red lines. Accordingly, increased crude oil prices have pushed up retail gasoline prices proportionally less abroad than in the United States.

The middle left panel presents some calculations of the rates at which the changes in crude oil prices were passed through to the retail gasoline prices between September 2004 and March of this year, the most recent observation I have for these countries. During this period, rates of pass-through were lower abroad, particularly for Japan and Germany, the countries with relatively high taxes. The smaller pass-through of oil prices to retail gasoline prices abroad has also shown through to broader measures of consumer energy prices. As shown to the right, consumer energy prices in Canada, Germany, and Japan have increased less than those in the United States over the past four years. An extra factor holding down energy price inflation in Canada over this period was the substantial appreciation of the Canadian dollar, which made imported energy relatively cheaper. Overall, this suggests that the effects of past increases in global energy prices on headline inflation, as well as on consumer sentiment and inflation expectations, were likely smaller abroad than in the United States.

In many emerging market economies, gasoline and other retail energy prices are controlled or subsidized, so that energy-related fluctuations in consumer prices, if they occur at all, tend to be gradual. For this group of economies, what has left a bigger imprint on headline consumer price inflation in recent months is the global rise in food prices. The black line in the bottom left panel shows that food price inflation in Mexico has been heavily influenced in recent years by enormous, weather-induced swings in domestic tomato price inflation, shown in red (of course). [Laughter] This year, however, food price inflation has not followed tomato price inflation down. Rather, it has been sustained in part by a sharp acceleration in prices of tortillas and other corn products, shown by the green line, which are responding to the fuel-related surge in the global price of corn. Food price inflation in China, shown to the right in black, has also been boosted by higher grain prices, as higher feed costs, along with an outbreak of swine flu, have driven up meat and poultry prices. Prices for corn and other grains are forecast to level out by the end of 2008, after they have increased enough to align supply and demand growth. A risk, of course, is that further rapid expansion of demand might continue to outstrip that of supply, making food price inflation more persistent and more likely to spur inflation in other sectors. The Bank of Mexico cited such a risk following its policy tightening in April, and China's

authorities have raised concerns that food prices may exert upward pressure on wages.

Evidence for emerging market economies that inflation pressures might already be spreading outside the food and energy sectors is limited so far, however. The top left panel of exhibit 12 shows core inflation rates in four of our largest emerging market trading partners. China's core rate (in blue), which excludes only food, shows no sign of wider inflation pressures. In Brazil, inflation has declined substantially over the past few years, despite a slight uptick recently. Core inflation in Korea has been trending upward, but it is still low. Mexico's core inflation rate has edged up toward 4 percent, a rate that concerns Mexican authorities, but this upward trend may merely reflect the fact that core inflation in Mexico does not exclude processed food such as corn tortillas. The advanced foreign economies appear to be exhibiting more broadly based inflation pressures. As shown on the right, in Canada, the euro area, and the United Kingdom, core inflation has been on a rising trend since the middle of 2006 or earlier. In response, the central banks in all three economies, as well as the Bank of Japan, are expected to tighten policy in the near term. Core inflation is still in generally acceptable ranges, however, except perhaps for the Bank of Japan, for which it might be too low, and market sentiment does not indicate concern that inflation pressures are going to rise substantially. As you can see from the middle left panel, ten-year government bond yields in the major markets have all risen since the beginning of the year. Except for Japan, most of the increases in nominal yields (the first column) can be attributed to higher real yields, shown in the second, which is consistent with stronger prospects for growth. The table to the right shows that survey measures of inflation expectations for the year 2007 rose moderately for Canada between December and June and a bit less for the United Kingdom, whereas the measures fell off some for the euro area and Japan. Longer-run inflation expectations as of the most recent survey date in April were still locked in at rates consistent with inflation targets in Canada, the euro area, and the United Kingdom. Our outlook for headline inflation abroad, shown in the bottom panels, reflects a diminishing inflationary impulse from oil and other primary commodity prices as they flatten out over the forecast period. It also incorporates the view that some further monetary policy tightening will be needed to restrain domestic demand and guide inflation in each economy toward its price stability objective by the end of the forecast period.

Your last two international exhibits focus on the extent to which external adjustment is under way. A little more than a year ago, in May, was the last time we forecast that the U.S. current account deficit in 2007 would exceed \$1 trillion. Since then, as shown in the top left panel of exhibit 13, our outlook for the current account has improved substantially, so much so that currently we don't see the deficit reaching \$1 trillion within our forecast period. As shown to the right, much of the improvement has come through an improved outlook for the trade balance. What surprised us? Two likely suspects fail to provide the answer. Given the recent strength of foreign growth, one might have thought that a year ago we were perhaps too pessimistic on foreign activity and consequently undershot on U.S. export

performance. However, as shown in the middle left panel, our outlook today for foreign economic activity is very similar to what we had in mind a year ago. Similarly, the decline over the past year in the broad real dollar, shown to the right, which has helped curb the deterioration in the trade balance, has turned out to be not much different from our forecast a year ago. Part of the answer, it turns out, is that, even though the assumptions we fed our model for exports have not proved much off the mark, our model forecast for core exports, shown at the bottom left, failed to catch the unusually strong growth of exports in 2006. We attribute this miss to the composition of foreign demand rather than its overall magnitude. As shown in the table to the right, the largest contributors to growth of U.S. core exports in 2006 were in the categories of capital goods (line 2) and industrial supplies (line 3). With capital goods making up a large fraction of core exports, the rise in foreign investment as a share of GDP (mentioned earlier) likely provided a boost to core exports above that indicated by our aggregate measure of foreign GDP. Similarly, the global commodity boom likely favored U.S. exports of industrial supplies.

Additional factors behind the improved outlook for the U.S. current account are described in exhibit 14. One is the lower path of U.S. real GDP, shown in the top left panel, which prompted real imports of core goods, shown to the right, to expand along a shallower trajectory than we had predicted last year. A third factor, illustrated in the middle left panel, is that we did not forecast the dip in the price of oil in the second half of 2006, which reduced the value of oil imports substantially. These three factors explain the bulk of the upward adjustment in our forecast for the trade balance in 2007. In addition, the improved outlook for the current account reflects an upward revision to net investment income, shown in the middle right. This adjustment results from a number of factors, including new data on U.S. holdings of direct investment abroad, new procedures for determining interest payments to foreign holders of U.S. Treasuries, and a change in the methodology used to record interest flows on cross-border holdings of other fixed-income securities. As a result of these surprises, the external accounts have clearly improved. Going forward, we expect the current account deficit to resume widening nonetheless as interest payments on the net external debt mount. But the combination of solid, demand-driven foreign growth and weaker U.S. growth has led the external accounts to make a more positive contribution to U.S. GDP growth in the near term, as shown in the table. In our current forecast, shown in the rightmost column, we project that the arithmetic contribution of real net exports to GDP growth should be roughly neutral starting in the second half of this year, as strong foreign growth helps sustain real export gains that match those of real imports.

CHAIRMAN BERNANKE. Thank you. That was an excellent report. We have time now for some questions for our colleagues. Any questions? President Lockhart.

MR. LOCKHART. Aircraft constitute what share of capital goods exports, and might they have something to do with the competitive situation, particularly between Boeing and Airbus?

MR. LEAHY. Aircraft are an important factor in this. In the fourth quarter of last year, Boeing was essentially exporting all the aircraft it could produce; so coming into the first quarter, we didn't get much more because there weren't any more to sell. But that issue has been important. I don't know to what extent Boeing has benefited from the fact that Airbus has had some hard times, but I suspect it has gotten some benefit from that.

MS. JOHNSON. Aircraft are roughly 5 percent of exports.

MR. LOCKHART. Five percent of capital goods or of total exports?

MS. JOHNSON. More like 20 percent of capital goods and 5 percent of exports.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. I want to take David back to exhibit 5 and try to pin him down, although I am not very hopeful. [Laughter] You took us back to the period from 1996 to mid-2004, in which inflation, by the core PCE measure, was between 1 and 2 almost all the time—I think the only exception was basically the last few months of 2001. Core inflation averaged something like 1.6 percent. You take these three survey measures there and look at them. What I took away from your assessment was that you view these as roughly consistent with that period. Is that fair?

MR. WILCOX. I would say that the answer differs by series, so that if you tend to favor the short-term Michigan series shown in the top right, you might get a more alarming picture. But, for example, the Survey of Professional Forecasters' ten-year-

ahead series is all the way at the other end of the spectrum, having been essentially rock solid at 2.5 percent, and these other series fall somewhere in between. Obviously, this analysis is extraordinarily simple and doesn't take into account other factors that may have been at work over that eight-year reference period that are not operating now. But the hope was that, on a very rough and ready basis, this might be broadly indicative and that an eight-year period might capture some variation in other factors that were influencing inflation.

MR. LACKER. I am wholly on board with you there. What I was most curious about was what you took away from this for your core inflation outlook, which you have going to 2.0 real soon and staying there, and whether you view current expectations as broadly similar to this period and your forecast as consistent with that period? Or do you view expectations and your forecast as potentially at variance with that period, or some combination of the two?

MR. WILCOX. I think we view the current constellation of expectations measures as not providing much impetus either upward or downward on inflation—it is just not going to be an important factor shaping the contour of inflation in our view.

MR. LACKER. Okay. A question I had—and maybe Vince can help with this—is that the TIPS measures obviously don't go back that far; and going back only as far as they go, my sense is that most analysts don't view them in the earliest period in which we have quotations as representing prices and markets liquid enough to give us a sense. I guess 2003 is around the borderline of the reliability period. In 2003, those TIPS spreads for the next five years were down well into the 1 to 2 percent range, very close to

1½ percent. Do you folks view the TIPS spreads in the year or two leading to 2003 as something out of which we should take any information about inflation expectations?

MR. WILCOX. Well, there is a picture in the lower right panel of chart 1 in the Bluebook.

MR. LACKER. It goes back only to '04, doesn't it?

MR. WILCOX. Yes, that is right.

MR. LACKER. Well, I was looking at Greenbook Part 2, page II-35, and it goes back to '01.

MR. WILCOX. In my conversations with some of the TIPS analysts on our staff, they suggested, as consistent with your statement, that 2003 was, roughly speaking, the period in their view in which the TIPS market emerged into the modern era with some tighter pricing.

MR. LACKER. So there is some informational content there. Are you giving me some comfort in that regard?

MR. WILCOX. Yes.

MR. REINHART. I think the thing to note, President Lacker, is that, if you look at the term structure of TIPS compensation, the five-year, five-year-forward in that has been a whole lot more stable. The quotes you are looking at are very much influenced by the first five years. In fact, at the end of 2001, again in 2002, and in the middle of 2003, the first five years' inflation compensation fell below 1½ percent.

MR. LACKER. The TIPS spread measure?

MR. REINHART. Yes, the TIPS inflation-compensation measure. During the same period, however, the five-year, five-year-forward basically bounced up and down around 2½ percent.

MR. LACKER. Right. So the longer-run expectations maybe weren't so anchored or weren't tied to the middle of this period. But we had a period in which there was an indication that expectations over the near term were around 1½. I guess the thing I would be curious about, and maybe Vince's presentation is a more appropriate time to address this question—I would be happy to defer it until then—is that viewing 1996 to 2003 as sort of a distinct period in which we nailed things between 1 and 2 for a while suggests thinking about the transition from '03 forward a couple of years as a transition out of price stability defined that way and whether we can take any lessons from that for the potential costs of a transition back to a period like that.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. Mr. Chairman. I just wanted to thank Mike, in particular, for that excellent presentation on the international dimension of this. It was sterling, or euro, or whatever the expression would be in terms of its excellence. I have a tutorial question about the export figures. I assume services are not included in core exports. Is that correct?

MR. LEAHY. No, that is just goods.

MR. FISHER. Are our service exports increasing more rapidly than our non-service exports? Do you know? Would they be a possible source of explanation for the improved trade balance?

MR. LEAHY. They are a possible source. They were my fourth factor, if I had gone on longer. [Laughter] They were neck and neck with the oil imports in terms of their contribution to the improved outlook for trade.

MR. FISHER. Well, thank you. That was an excellent presentation.

CHAIRMAN BERNANKE. President Hoenig.

MR. HOENIG. Just a question about scale—regarding exhibit 8, serious mortgage delinquency rates—when you refer to adjustable rates going to almost 12 percent of loans, is that of adjustable-rate loans? What is the total dollar value the 10 percent is against?

MS. LIANG. The serious delinquency rate is for the pool of adjustable-rate subprime loans, and they represent about 9 percent of the outstanding mortgages.

MR. HOENIG. Okay—and the total outstanding mortgages are what dollar amount?

MS. LIANG. There is \$10 trillion in mortgages outstanding.

MR. HOENIG. That is what I thought. I just wanted to make sure. Thank you.

VICE CHAIRMAN GEITHNER. But to make sure that is right, the red lines are subprime?

MS. LIANG. The red lines are subprime.

VICE CHAIRMAN GEITHNER. Subprime are?

MS. LIANG. Subprime adjustable-rate loans are about 9 percent of outstandings, and subprime fixed loans are another 5 percent of outstandings. That would be 9 percent of the \$10 trillion in total mortgages.

CHAIRMAN BERNANKE. Although the percentages are by number of mortgages rather than by value, I think.

MS. LIANG. By dollar it is very similar.

CHAIRMAN BERNANKE. Are there other questions? President Moskow.

MR. MOSKOW. Also, on exhibit 8, the net worth chart in the top left-hand corner—I thought I heard you say that this was high by historical standards. So there are two things here—the stock market has been strong, and then housing prices have been very weak. I assume if you run this out into another year, the line is going to keep going down as well. I was just wondering if you could expand on this. Is this higher than you expected it to be at this particular time?

MS. LIANG. If we had started this series in the early '90s, this would be the high. We have the stock market bubble of 2000 in here, and it has come off, but it is $5\frac{1}{2}$. Even at the end of the projection period, it is $5\frac{1}{2}$ times disposable income. That is historically high. Before '96, it would have been about $3\frac{1}{2}$ or 4.

MR. STOCKTON. We do indeed forecast it to continue to decline over the next year or so, in large measure because, as David shows in his chart, we still think this house price adjustment has to proceed further before we get into a better equilibrium. Our assumption on the stock price, of course, is pretty neutral because we have it going up pretty close to the overall rate of nominal income, so I think the downward tilt is being driven mostly by the house price story.

MR. MOSKOW. On a longer-term trend basis, where would you expect it to stabilize or to level out?

MR. STOCKTON. Take this for what it is worth, which isn't a whole lot.

[Laughter] Thank you. It drops just a bit; it is between $5\frac{1}{2}$ and $5\frac{1}{4}$ over the longer haul and just gradually declines back in that direction.

CHAIRMAN BERNANKE. President Hoenig, I think I interrupted you. I'm sorry.

MR. HOENIG. This is the number of loans—then do you have any idea what the percentage of the dollar amount of loans is in delinquency?

MS. LIANG. We think there is probably \$900 billion to \$1 trillion in adjustable-rate subprime mortgages outstanding.

MR. HOENIG. So about the same. Okay.

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. I wasn't sure I heard correctly. What was the average ratio of wealth to disposable income over the '90s roughly?

CHAIRMAN BERNANKE. The number I recall is 4.6 as the long-run average since the '80s. President Stern.

MR. STERN. I want to go back to the surprise in net exports once again. I don't quite remember the argument, but it seems to me we used to worry a lot about small foreign elasticities of demand for U.S. goods and services when the dollar declined or when income growth differentials changed. Has what we have seen lately affected your view about that?

MR. LEAHY. I would say it hasn't affected our view in the sense that we haven't changed the elasticities that we are using on the basis of this one year's observation, but it points in the right direction. I mean, we are getting a little bit more "umph" from foreign

growth than we thought before. Whether it is going to be a one-time miss related to aircraft—there was some temporary investment surge in foreign economies, and we are a capital goods exporter, and we are just taking advantage of that, and it is going to go back—or whether it persists is a little too early to tell. But it is possible.

MS. JOHNSON. We have updated the elasticities since ten years ago. When you first heard us nattering on about the unsustainability of the U.S. current account situation, we had perhaps a more extreme view of those elasticities. If you drop out the 1970s and you restrict your estimates to a more recent period, you tend to get elasticities that move toward each other a little. But the basic asymmetry is still there, and we haven't responded to 2006 in some specific way. We're letting a little more time go by to see what happens going forward.

MR. STERN. Thanks.

CHAIRMAN BERNANKE. Governor Kroszner.

MR. KROSZNER. In exhibit 9, the average initial rate on the stock of mortgages that you are looking at for resetting over the next couple of years is about $7\frac{1}{3}$ percent. What is roughly the current rate for subprime fixed-rate loans?

MS. LIANG. It is around 9 percent. If you get on the Internet and try to find a subprime fixed-rate loan, it would be about that. We can't find an official series, but roughly 9.

MR. KROSZNER. So they are facing a $2\frac{1}{2}$ percent payment shock if they stick with the mortgage. But if they were able to switch to a fixed-rate product, it is about $1\frac{1}{2}$ percent.

MS. LIANG. That's right, right now.

MR. KROSZNER. Thank you.

CHAIRMAN BERNANKE. If there are no other questions, Vincent, could I call on you to talk about the economic projections?

MR. REINHART.³ Sure. Thank you, Mr. Chairman. As was evident in the survey responses summarized in the memo of June 15 on your attitudes toward the economic projections, there seems to be broad agreement among you on the key features of the process. Where there was not, including about sharing forecasts, the specification of the monetary policy assumption, and the characterization of uncertainty, the Subcommittee on Communications tried to find common ground. The result was reflected in the survey on the economic outlook for this meeting, which I will discuss with the aid of the material distributed with the cover “Economic Projections of FOMC Participants.”

As can be seen by comparing the bolded with the italicized numbers in the first exhibit, there were only minor changes in your projections of real GDP growth, the unemployment rate, and core PCE inflation over the next two and one-half years from those you submitted in May. Given the favorable data over the intermeeting period, you raised your real growth forecasts a notch and lowered the core PCE inflation forecasts for 2007. Still, as plotted in the top panel of exhibit 2, the red bars showing the central tendency of your forecasts indicate that most of you anticipate that GDP growth will be somewhat soft this year but will pick up a bit over 2008 and 2009. Although the submissions were not specific about potential output growth—and not all of you would agree that it is even a useful concept—this expansion of real output would seem initially to be slower than that of capacity in that the central tendency for the unemployment rate (the second panel) edges higher. With resource markets less taut and perhaps some transitory factors ebbing, core PCE inflation (the third panel) drifts down. In this experiment, you were asked for inflation readings coming from two measurement systems. The historical wedge between inflation measured by the core PCE price index and the total consumer price index is about ½ percentage point. The central tendency projections for those two series in 2008 and 2009 are about that far apart, leading to the inference that you are not forecasting significant changes to the relative prices of energy and food. The subcommittee suggested forecasting these two inflation series in the spirit of experimentation. Sometime in the next two days, you might want to express how useful you found that part of the experiment.

Another notable feature of your projections is that the differences among them widen, rather than narrow, the further into the future you forecast. This suggests a diversity of views as to key attributes of the economy as well as where you believe inflation should be headed in the long run. As for the assumption about monetary policy underlying these outcomes, about two-thirds of you indicated general agreement with the path laid out in the Greenbook. As for the others, there were explanations advanced for being on either side of the staff assumption.

³ Material used by Mr. Reinhart is appended to this transcript (appendix 3).

You were also asked to provide a qualitative characterization of your uncertainty about your outlook. The results for real GDP growth are given in the top panel of exhibit 3. Somewhat surprisingly, there was no Lake Wobegon effect, and the preponderance of responses viewed the real GDP growth outlook as just about as uncertain as has been the case on average over the past twenty years. As shown in the bottom panel, a majority of the submissions indicated that the risks around the projections for GDP growth are judged to be broadly balanced. This contrasts with the indication in the May minutes that, although the risks to economic activity had “diminished slightly,” they were still “weighted to the downside.” For some, the incoming news may have led to a reassessment of the risks to economic growth. For others, it may reflect a view that the main downside risks to activity are concentrated in the near term and those risks further ahead are broadly symmetric. To shed light on this issue, participants might want to address the main risks to economic growth and whether they are still judged to be weighted to the downside as had been the case in your May discussion.

Some more detail about your forecasts of the unemployment rate is provided in exhibit 4. A majority of the projections embody a more muted rise in the unemployment rate than in the Greenbook forecast, the dashed vertical lines. This smaller expected increase may partly reflect the stronger outlook for GDP growth suggested by many of your projections. But then again, it may not: [laughter] From the comments in the narratives about the likely strength of trend growth, it is not clear that the projected growth in output relative to trend is expected to be materially more robust than that suggested by the staff’s forecast. Does the more modest projected rise in unemployment reflect a difference in views from the staff’s about the rate of growth of potential output, the unemployment rate associated with no change in the inflation rate, cyclical movements in productivity, or other factors?

Exhibit 5 provides a tally of the year-by-year inflation outlook. A majority of the projections have a more benign medium-term outlook for core inflation than that suggested by the staff’s forecast. But the responses to the question about the appropriate path of interest rates indicate that for a majority of projections this does not stem from a significantly tighter stance of monetary policy than assumed by the staff. Likewise, the projections for GDP growth and unemployment do not appear to imply greater economic slack than expected by the staff. For some, this more marked moderation in inflation may reflect a judgment that more of the rise in core inflation reflects the effect of temporary influences, such as the rise in energy prices and owners’ equivalent rent, that are likely to abate over the forecast period. For others, it may reflect an assessment that the NAIRU is lower than that assumed by the staff or that inflation expectations may edge lower over the forecast period, perhaps pulled down by Federal Reserve communications. You might wish to exchange views about the main factors contributing to the expected moderation in inflation in your forecasts.

As to where inflation is headed in the longer run, many of you indicated that the third-year projections (the bottom panel) reflect to a considerable degree your policy goal rather than initial conditions. If that is the case, the central tendency reveals that most of you individually define the inflation rate that best fosters the dual mandate to be 1½ to 2 percent when measured by the core PCE inflation rate. Given your apparent beliefs about future movements in the relative prices of food and energy, discussed earlier, you would also seem to think that total PCE inflation should place within a range of 1½ to 2 percent.

As for the process from here on, if you would like to change your forecast in light of the discussion at this meeting or data received since you prepared your projection, we ask that you submit your revision to the Secretariat by close of business Friday. Unless we are instructed differently as a result of the discussion tomorrow, the staff will draft a minutes-style narrative description of the economic projections. This will be a standalone document that will circulate with the draft minutes on the regular schedule as was the case in May.

One last point: Your final exhibit gives the traditional presentation of your economic projections that will be made public in the Monetary Policy Report and included in the published minutes. If you want to change your submission, please let us know by Friday. How you judge the usefulness of this exhibit compared with the forecasts compiled for the experiment presumably will be one topic for discussion tomorrow. That concludes my prepared remarks.

CHAIRMAN BERNANKE. Thank you, Vincent. Thanks for reminding us that this projection counts in some sense, right? [Laughter] Also, I think it is very useful for us to have the discipline of thinking about how our projections fit together. Are there questions for Vincent? If not, then we can begin our economic go-round. Who would like to go first? President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. Data relating to both economic activity and inflation during the intermeeting period have been encouraging. Economic indicators have strengthened considerably, and recent readings on core inflation have been quite tame. Although a portion of the recent deceleration of core prices likely reflects transitory influences, the underlying trend in core inflation is still quite favorable. I view the conditions for growth going forward as being reasonably solid. The main

negative factors are tied to housing. The latest data don't point to an imminent recovery in this sector, and I fear that the recent run-up in mortgage rates will only make matters worse. In addition, housing prices are unlikely to rise over the next few years and, indeed, may well fall, and the absence of the housing wealth gains realized in the past should damp consumption spending. I agree with the Greenbook that the recent run-up in bond and mortgage rates reflects primarily a shift in market expectations for the path of policy and, therefore, implies only a small subtraction to my forecast for growth in 2008.

In my view, the stance of monetary policy over the next few years should be chosen to help move labor and product markets from being somewhat tight today to exhibiting a modest degree of slack in order to help bring about a further gradual reduction in inflation toward a level consistent with price stability. The stance of monetary policy will need to remain modestly restrictive, along the lines assumed in the Greenbook and by markets, in order to achieve that goal. My forecast is for growth to be around 2½ percent in the second half of this year and in 2008, slightly below my estimate of potential growth, and for the unemployment rate to edge up gradually, reaching nearly 5 percent by the end of next year.

Under these conditions, core inflation should continue to recede gradually, with the core PCE price index increasing 2 percent this year and 1.9 percent in 2008. This forecast is predicated on continued well-anchored inflation expectations and the eventual appearance of a small amount of labor market slack. In addition, special factors such as rising energy prices and the sustained run-up in owners' equivalent rent that have boosted inflation should ebb over time, contributing a bit to the expected decline in core inflation.

In terms of risks to the outlook for growth, I still feel the presence of a 600-pound gorilla in the room, and that is the housing sector. The risk for further significant deterioration in the housing market, with house prices falling and mortgage delinquencies rising further, causes me appreciable angst. Indeed, the repercussions of falling house prices are already playing out in some areas where past price rises were especially rapid and subprime lending soared. For example, in the Sacramento metropolitan area east of San Francisco, house prices shot up at an annual rate of more than 20 percent from 2002 to 2005. Since then, however, they have been falling at an annual rate of 3½ percent. Delinquencies on subprime mortgages rose sharply last year, putting Sacramento at the top of the list of MSAs in terms of the changes in the rate of subprime delinquencies.

Research by my staff examining metropolitan areas across the country indicates that the experience of Sacramento reflects a more general pattern. They found that low rates of house price appreciation, and especially house price decelerations, are associated with increases in delinquency rates even after controlling for local economic conditions such as employment growth and the unemployment rate. One possible explanation for these findings is that subprime borrowers, especially those with very low equity stakes, have less incentive to keep their mortgages current when housing no longer seems an attractive investment, either because prices have decelerated sharply or interest rates have risen. These results highlight the potential risks that rising defaults in subprime could spread to other sectors of the mortgage market and could trigger a vicious cycle in which a further deceleration in house prices increases foreclosures, in turn exacerbating downside price movements.

The risks to inflation are also significant. In addition to the upside risks associated with continued tight labor markets, a slowdown in productivity growth could add to cost pressures. Although recent productivity data have been disappointing, I expressed some optimism at the last meeting about productivity growth on the grounds that at least some of the slowdown appeared to reflect labor hoarding and lags in the adjustment of employment to output, especially in the construction industry. Data since that meeting have reinforced my optimism concerning trend productivity growth. In particular, new data in the recently released Business Employment Dynamics report suggest that productivity growth may have been stronger than we have been thinking. This report, which includes data that will be used in the rebenchmarking of the payroll survey in January, shows a much smaller increase in employment in the third quarter of 2006 than is reported in the payroll survey; it, therefore, implies a larger increase in output per worker.

A second risk to inflation is slippage in the market's perceptions of our inflation objective. Although inflation compensation over the next five years is essentially unchanged since our last meeting, long-run breakeven inflation rates implied by the difference between nominal and indexed Treasury securities are up about 20 basis points. However, our analysis suggests that this increase reflects in good part an elevation in risk premiums or the influence of various—let me call them “idiosyncratic”—factors of the type that Bill Dudley mentioned, such as a possible shift in the demand by foreign central banks for Treasuries or special factors affecting the demand for inflation-indexed securities and not an increase in long-run inflation expectations. We base this conclusion on the fact that long-run breakeven inflation rates have also climbed in the United

Kingdom—a country where inflation expectations have been remarkably well anchored over the past decade and where inflation has been trending downward. The fact that breakeven inflation rates rose in both countries, despite their different monetary policy regimes, suggests that a common explanation is needed rather than one specific to the United States. I think this conclusion is supported by the Board staff model that attributes about half of the movement in breakeven inflation to risk premiums. That said, our understanding and estimates of risk premiums are imprecise, so we must continue to monitor inflation expectations very carefully—of course, along with everything else.

[Laughter]

CHAIRMAN BERNANKE. Thank you. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. Conditions in the Seventh District have changed little since my last report. Overall activity in the District is lagging the nation, mainly because of the continued difficulties of what we now call the Detroit Three, formerly known as the Big Three, [laughter] and their suppliers. But other sectors of our region are doing better—notably, a number of manufacturers outside autos—and consumer spending is moving forward at a moderate rate.

Looking at the outlook for the national economy, the Greenbook baseline forecast has growth recovering to potential and core inflation stabilizing at 2 percent. Our outlook is not much different. We see growth returning close to potential. Assuming that monetary policy maintains its slightly restrictive stance, we think inflation will edge a shade below 2 percent by 2009. That would be a good outcome, and I sure hope we get it.

The biggest news since the May FOMC meeting is the adjustment in financial conditions. The change in fed funds futures brings market expectations into better alignment with what I think will be the appropriate path for monetary policy. I'm not sure, however, how much restraint we can expect from the increase in long-term interest rates. As the Chairman heard from our directors last week, the effects can be muted by ample liquidity in the financial markets. One of our directors, who heads a large private equity firm, says that he does not see much of a change in the lending environment. Financing for even high-risk projects continues to be readily available at quite favorable rates and terms. Notably, such loans are being made with few covenants and no automatic default triggers.

Of course, the housing market remains a risk. Like the Greenbook, we continue to expect large declines in residential investment through the end of this year, and I remain concerned that builders may need to cut back even more to reduce the high inventory of unsold homes. Our Detroit Branch director, who is CFO of Pulte Homes, noted that two-thirds of their sales usually occur between the Super Bowl and Memorial Day. Sales this year in that period were sluggish and relatively unresponsive to price discounting. Accordingly, he is not looking for a turnaround in housing markets before '08. Another director, the head of U.S. Gypsum, agreed that it would be '08 before we could expect a pickup in housing.

With regard to consumer spending more generally, some contacts noted the impact of higher gasoline prices. A developer of malls and shopping centers downgraded his expectations for the rest of 2007, but he is not overly pessimistic and is expecting retail sales in the second half to remain near their first-half pace. Both GM and Ford

believe that the higher gasoline prices are holding down the overall level of motor vehicle sales in addition to moving the mix of sales away from SUVs and toward cars. At this point, they believe that higher interest rates are having only a marginal effect on demand. Both are predicting that total light vehicle sales will be about 16.5 million units in 2007. That is the same as the pace predicted by the participants in our annual outlook symposium that we held in Detroit earlier this month.

But the rest of the manufacturing is doing better than autos. Producers of heavy machinery and agricultural equipment continue to report strong demand. The Chicago purchasing managers' report, which is confidential until its release this Friday, was 60.2 in June; that reading is down only a bit from its very high one of 61.7 in May. Some of this strength reflects strong growth abroad, which is fueling the demand for U.S. products, as we talked about during the chart show. Indeed, I think that there may be some upside risks to the GDP forecast from faster-than-expected export growth. Labor markets continue to be strong, and we heard the usual stories about selected labor shortages and associated increases in wages. One exception is the soft demand for temporary workers, but this could be normal for a mature business cycle.

Turning to prices, our contacts seem to be a bit more pessimistic about the prospects for inflation. We heard concerns that higher energy prices would boost transportation costs and that the demand for food stuffs from abroad and the booming domestic ethanol market are pushing up food prices. In contrast to the anecdotes, the incoming data on core inflation were better than expected. Our indicator models revised down a tenth or two from the last round; they now have core PCE inflation being about 2 percent this year and next and then edging down to 1.8 or 1.9 in 2009. Without any

meaningful resource slack, this improvement would require a comparable adjustment in inflation expectations, which may be difficult given a prolonged period of core inflation at or above 2 percent. So I continue to think that the predominant risk remains that inflation will not moderate as expected.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. The Fifth District's economy has picked up since the last meeting. Retail sales rose briskly in June following several months of flatness, and shopper traffic increased more broadly as well. Of particular interest, building supply and furniture retailers report better sales. Big-ticket sales remain generally weak, however, with domestic brand automobile dealers continuing to note soft sales. Activity at District services firms added to an already healthy pace of growth, with revenues and employment expanding somewhat faster in June. In May, our manufacturing sector finally joined in the general manufacturing pickup that began a few months back in other regions. Our indexes for shipments and new orders swung well into positive territory after having spent the entire year well down in the negative region. This rebound appears to be broadly based, with most industries posting stronger readings. Housing sales and construction remain weak in most parts of the District, though home prices have been more resilient, with very modest gains reported in most areas and lower prices in only a few. In contrast, the commercial real estate sector appears to be fairly strong, with both leasing and construction looking solid.

Regarding inflation, our survey measures suggest that price trends in the services sector remain moderate. Our manufacturing numbers, however, consistent with President

Moskow's report of anecdotal information, indicate significant price acceleration, on both the product and the input sides.

At the national level, the new information on the real economy we have received since the last meeting has been fairly positive. In particular, I'm heartened by the recent reports on business investment and manufacturing, which appear to confirm our expectations that the softness we were seeing a few months ago would prove to be transitory. Consumer spending also continues to expand, although not as rapidly as earlier in the year. Housing, of course, continues to be the main drag on spending, and the most prominent source of uncertainty about the real outlook. My sense is that the uncertainty is receding, however. Construction numbers have more or less moved sideways since the beginning of the year, in contrast to the sharp fall we saw in the first three quarters of last year. So it looks to me as though we're nearing a bottom in housing activity, albeit a bottom that may slope gently away from the steep cliff we descended last year. At this point, I think the risk of encountering another cliff has become relatively small.

We have also received favorable readings on core inflation for the past three months. This has brought the twelve-month core PCE number down to 2.0 percent. While this news is good, we should react cautiously, of course. We have seen several months of favorable data before only to see several months of unfavorable numbers. Moreover, the Greenbook points to a number of special factors suggesting that the second quarter's better inflation performance is likely to be transitory. I am inclined to agree with that assessment, and so I think we could well see core inflation rise again.

Measures of near-term inflation expectations have not moved much in recent months. They all still point to PCE inflation expectations of 2 percent or so. Moreover, five-year, five-year-ahead inflation compensation has moved up $\frac{1}{4}$ percentage point, for whatever reason, since just before our last meeting. All this makes it hard to be confident that we are going to see a sustained decline of inflation below 2 percent anytime soon. The good news on the real side, however, suggests that we are making progress toward seeing downside risks diminish enough for us to do something about inflation. Thank you.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, for the sake of consistency, I will refer to my report at the last two meetings on what I call the Goldilocks porridge classification system. I reported last that the international economy was hot, and it remains so as we saw in the excellent slide presentation. I reported that the domestic economy was cold. I believe it remains so, in contrast I think to the previous two interventions, at least from a growth perspective. I also reported that the Eleventh District, home of the NBA champions, vanquishers of the—shall I say “more cavalier”?—Fourth District, [laughter] was just right. It remained so in relative terms. I would say that it has weakened somewhat and cooled somewhat in absolute terms.

I just want to comment quickly on the international side of the domestic economy, with the hopes of adding on the margin to the staff’s excellent work in the Greenbook, the Bluebook, and the presentations we had earlier. On the international side, I was pleased that for the first time, at least since I have been a member of this august body, the last minutes reported that the participants expressed “some concern that the strength of

global demand could contribute to price pressures at home” and noted “heightened levels of capacity utilization in those countries.” We didn’t talk about capacity utilization in your excellent report. I just wanted to add that our work in Dallas and my CEO contacts continue to validate the phenomenon that we are getting closer to capacity constraints abroad. Research by the Dallas staff, imperfect as it is, confirmed continued growth overseas, resulting in a tightening of capacity around the world, as does the work of JPMorgan, one of the few places in the private sector that we find has spent a good deal of time contemplating this issue.

Anecdotal reports from CEOs and CFOs confirm this trend. The rest of the world is reported to be offering more fertile soil for growth and investment, as I think President Moskow pointed out. Shippers tell me that tonnage demand for dry bulk is running at a rate significantly higher than last year, driven by underlying demand outside the United States and despite slower rates of growth of shipments to the United States. You also see this in ship charter rates remaining high. Freight rates, which don’t have a spot market and are much more difficult to measure, appear to be rising in terms of their volume expansion and in shipments to Europe from the Pacific—certainly at a faster rate than those shipments from the Pacific to the United States.

One of the largest engineering logistics firms in the world reports that, with the exception of downstream oil and gas investments, power, and an as yet unannounced nuclear power plant that will be built in the United States, their bookings and substantial backlog are “all driven by non-U.S. demand, with cost escalation not only of commodity inputs but of the building blocks and their materials, such as compressors and pumps, and so on, despite the leveling-off of the price of steel.” On the cost side, the head of the

United States' largest importer of consumer goods—without mentioning the name of the retail company—[laughter] reports that cost pressures, as you indicated before in your presentation, coming from China are leading them to “aggressively seek to shift imports to other country sources; in certain sectors, China is becoming too pricey.”

At home, business operators to whom I talked are more equivocal about growth prospects for the economy, Mr. Chairman, than I expected. The CEO of one of the largest rails describes the economy as “lethargic.” The CEO of one of the largest IT firms “doesn’t see much sequential growth.” The CEO of an airline, which is not Southwest Airlines, says that “domestically, the seasonally adjusted revenue for the industry line is flat.” A usually ebullient CEO of one of the nation’s largest broadcasters said that “while Q2 is always the slowest quarter, this one is slower than normal.” The CFO of one of the flagship express shippers reports that B2C is growing at 3 to 4 percent rates of volume expansion after several years of 7 to 8 percent rates of growth. But there has been no pickup in the second quarter over the first quarter seasonally adjusted, and “it just seems to be as flat as it can be across the board in all segments.” A leading restaurateur with thirty years in the business notes that he is experiencing a combination of soft top line and rising costs for the first time in his history of operating. For added measure, the CEO of a very large retailer describes demand as “flatter than a pancake.” He and retailers at the higher price points report that shoppers are moving away from the malls to closer-to-home retailers because of transportation costs and financial insecurity. They make fewer trips, and they buy larger volumes per trip.

President Yellen, I won’t depress you with the soundings from the two largest public homebuilders. I only half jokingly recommended that they take all sharp objects

off their desks and seal their windows. [Laughter] Their situation is reported to have gone from bad to worse. One of the interesting data points is that they represent 27 percent of the homebuilders. The remainder is in private developers' hands. They suggest that the rapidity with which those private developers report their stress is certainly much less than the publicly held companies, in part because they are afraid of their lenders. Therefore, those shoes have yet to drop, which is not an encouraging sign.

On the price front, I hear two common complaints across the board. First, labor remains tight and pricey except in the homebuilding sector, where there has been some relief for obvious reasons. Second—and I think very importantly—food prices driven by corn oil are creating significant cost pressures for all crops, including substitute crops. One of the most astute contacts I have—a leading banker, not a restaurateur or a food person—says that adding ethanol to what he called a tectonic shift in demand for corn, wheat, and other food stuffs stemming from the addition of two billion people—new consumers moving up the food chain (no pun intended)—may place corn at the center of the inflation paradigm in the new century.

One commonly voiced concern might influence business investment in capital expenditures. I keep hearing from each CEO, “What are we going to do with our capital?” Reports are increasing of competition from rates on the longer end of the yield curve, above 5 percent. Boards of directors are reluctant to embrace the concept that eighteen months out the U.S. economy's sun will shine more brightly than it is shining currently, and concerns linger about the costs and the availability of labor for domestic cap-ex purposes.

In summary, Mr. Chairman, statistically we may have a second-quarter snapback driven by inventory adjustment as predicted by the Board staff and by my own staff. But my soundings with business leaders—again, no doubt imperfect—provide some cognitive dissonance. I didn't hear a single one of twenty-six interlocutors who would agree with the baseline case as stated in the Greenbook. Most would agree with the alternative cases that were presented, which were quite thoughtful. I used the term "dyspeptic" in describing the mood of corporate leaders the last time we met. I would say the mood, Mr. Chairman, remains sour, and perhaps it has become more sour. I remain relatively pessimistic on growth and skeptical about inflation and the utility of reliance on the core measurement in guiding our deliberations. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Stern.

MR. STERN. Thank you, Mr. Chairman. Regarding the national economy and real growth, it seems to me that recent developments are unfolding to a considerable extent largely as anticipated. Growth was positive but subdued over the four quarters ending in the first quarter of this year. It apparently snapped back discernibly in the current quarter, and my forecast is for sustained growth around trend going forward. In examining the twelve-month period spanning the last three quarters of last year and the first quarter of this year, it is apparent that the slowing of aggregate demand went beyond the housing sector and, in fact, was fairly broadly based. To be sure, residential construction activity contracted persistently and substantially over those four quarters. In addition, spending on equipment and software barely advanced, federal government outlays were soft in real terms, and there was a significant inventory correction. In most cases, with the likely and perhaps obvious exception of residential construction, there are

reasons to believe, based on some of the indicators that David Wilcox covered this afternoon as well as materials distributed before the meeting, that these components of demand—that is, spending on equipment and software, federal government outlays, and inventories—will strengthen going forward. I thought it was particularly heartening, as noted in Part 2 of the Greenbook, that apparently the inventory overhang in construction supplies and in autos has been worked off, which suggests that we should see improvement in those sectors going forward. As I have commented before at recent meetings, I think the outlook for nonresidential construction, for net exports, and for consumer spending remains positive, although not unduly exuberant. All of this fits reasonably well with my view of what we should expect from productivity gains going forward, as well as increases in employment and hours worked. So, overall, I think the outlook for the real economy is promising and favorable.

As to inflation, there has been, as everybody has noted, some moderation in the core measures recently. I expect this performance to continue, not necessarily on a month-by-month basis but over time. Overall, my reading of monetary policy is that it is moderately restrictive. As a consequence, that should feed into a further, gradual diminution of inflation along with ebbing of some of the transitory factors that pushed it up for a time. I would add that anecdotes from our business contacts don't suggest any changes in pricing power or acceleration of inflation at this point.

Now, of course, risks to the outlook abound, as they always do, and many have already been mentioned. Several relate, of course, to housing—construction activity, home prices, mortgage-related paper, and so forth. Then, you can add uncertainty associated with energy prices, the run-up in long-term interest rates that has already

occurred, and I am sure a few things that I haven't enumerated. I wouldn't want to sound overly complacent or sanguine, but I would observe that many of these risks are not new. Many of them are already built into the Greenbook or other forecasts. In any event, if one of them were to occur in isolation, I would doubt that it would have a profound effect on the outlook that I have described. Thank you.

CHAIRMAN BERNANKE. Thank you. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. The pace of growth in New England, at least as measured by employment, remains below that of the nation. Indeed, since the trough of the last recession, New England's jobs have grown at less than half the pace of the nation as a whole. Some of this is the traditionally slower pace of job formation in the region, and some is undoubtedly the result of the kind of industries—telecommunications and technology more generally—that were hardest hit in the 2001 recession and have yet to recover fully. But some of it also revolves around issues of supply. Almost every firm, large or small, comments on the difficulty of finding skilled labor. There is also reason to believe that, at least relative to the rest of the nation, the supply versus demand imbalance may be a particular issue in the region. This comes from the Conference Board's online job-posting measure, which for some time has shown New England as having the highest number of advertised job openings relative to the size of the labor force. Contacts report that they are willing to offer—and do offer—higher pay to get the skills they need, but finding the workers is harder to do and takes longer than earlier in the cycle.

Another issue that came up again in our round of contacts is the pervasive rise in the cost of almost any metal, but especially copper and aluminum. Contacts at one very

large diversified company speculated about China's stockpiling valuable metals.

Whatever the cause, worldwide demand is strong, and prices are rising for all types of metal inputs. Some firms report progress in passing on those price increases. Indeed, larger manufacturing companies appear to be buoyed, if not driven, by strength in foreign markets. One firm reported that their booming aircraft business required such long hours and continued stress on skilled workers to figure out ways to meet demand that employee turnover had tripled. Not surprisingly, year-over-year manufactured exports for the region rose in the first quarter.

Elsewhere, news in the region has been fairly positive, with business confidence rising and commercial real estate markets good and improving throughout. Residential real estate markets remain slow. Regardless of what measure is used, the region's home prices appear to have slowed more than the nation's. However, although we had led the nation—this is not something in which you want to lead the nation—in the rate of rising foreclosure initiations, especially for those related to subprime mortgages, the pace of this growth has subsided. Indeed, initiations of subprime foreclosures went down in the region most recently. Moreover, in the most recent data on home sales, the Northeast was a bright spot. I have speculated before that the New England residential real estate market could be bottoming out. Such thoughts may remain in the category more of a hope than a certainty, but perhaps the pace of decline is slowing. Finally, while consumer confidence has been bouncy recently, probably from concerns about gasoline prices, demand seems reasonably strong as gauged by local retailers. Software and IT firms are showing considerable strength, and at least in our region, so is temporary help. Coincident indicators of regional health also show solid growth for all six states. In sum,

the region appears to be doing fairly well; and except for residential real estate, there are perhaps growing signs of price and resource pressures, in that regard not unlike the nation as a whole.

Turning to the nation, I was pleased to see that incoming data validated the substantial pickup in second-quarter growth that we, along with the Greenbook, had forecasted. Indeed, outside of residential investment, incoming data have depicted an economy that is growing at a relatively healthy pace. Data on shipments and orders of capital goods have improved, consumer demand seems relatively well maintained despite high gas and soft home prices, and payroll data show little sign of dwindling labor demand. Markets have at last decided to adopt the Committee's more positive outlook on economic prospects, and credit was repriced as a result. I view this event as healthy. It has tempered our GDP forecast slightly, but the continued ebullience of equity markets is an important offset. As I noted at our last meeting, we find ourselves a bit more optimistic than the Greenbook about trends in residential real estate, based on new housing starts and data on new home sales most recently, and we have moderated the pace of decline of residential investment for the second quarter just a bit relative to our May forecast. The April value of nonresidential construction put in place was a clear positive as well. The health of the rest of the world continues to surprise, and we, like the Greenbook, expect little drag from net exports over the forecast period.

Turning to projections for 2008 and 2009, the factors shaping our outlook haven't changed much. We continue to see output accelerating mildly as the housing situation moderates and more of the underlying strength of the economy shows through. This is tempered a bit both by rising long-term interest rates and by our expectations that

consumers will mend their ways a bit—consume less and save more. This hasn't shown signs of happening yet. By the end of 2009, GDP is about at potential, unemployment has ticked up a bit but remains below 5 percent, and core inflation moves down gradually to 2 percent—again, not much change and certainly within the central tendency of members' forecasts. One obvious risk to this forecast lies in housing, as everybody has said. But as I noted at our last meeting, the longer there are no obvious spinoffs from the subprime problem to the wider economy, the more that particular risk seems to ebb. Indeed, as we have yet to see the saving rate pick up with the moderation in consumption over what would be expected by the fundamentals, there may be some upside to growth. Pressures from abroad—worldwide expansion of somewhat larger size than we expected—do raise some upside issues, both for growth and for inflation.

On the inflation side, it is true that the April and May core data were encouraging. However, those numbers were dominated by temporary rather than permanent effects, at least in our view. So we haven't moderated our forecast of core inflation, as have the Greenbook authors, albeit they moderated it only in a very minor way, and I remain concerned about upside risks. Headline CPI inflation has been strong. The unemployment rate and widening concerns about input costs suggest that pressures to raise prices might have grown, and strong growth worldwide affects not only input prices but the value of the dollar as well. If anything, since our last meeting, I think that risks related to growth have abated and have become more balanced and risks regarding inflation have grown. Thus, as we look over the next two and a half years, our forecast sees policy staying somewhat restrictive given the inflation risks and then easing a bit in late 2008 or 2009 to a level closer to its equilibrium rate.

Finally, continuing some thoughts I began to articulate at our last meeting, as we think about policy, we also need to be concerned about financial stability. This is particularly true given what we've seen in the markets for credit derivatives. We've talked before about how high levels of liquidity and low interest rates worldwide cause much reaching for risk, much reaching for return, and related risk-taking. While the Bear Stearns hedge fund issue may well not have legs, the concerns regarding valuation of the underlying instruments do give one pause. Can markets adequately arrive at prices for some of the more exotic CDO tranches? What happens when the bottom falls out and positions thought to be at least somewhat liquid become illiquid? Is there a potential for this to spread and become a systemic problem? Maybe not, and I am not advocating our taking any action as a central bank. But I do think the size of the credit derivatives market, its lack of transparency, and its activities related to subprime debt could be a gathering cloud in the background of policy. Thank you.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Thank you. I will spend just a couple of minutes extra on the District this time because, generally speaking, our District economy continues to perform very well despite the weakness in the housing sector. Energy and agriculture remain very strong, and manufacturing remains generally strong although we have seen some leveling-off of that in the past month. The strength in these three sectors has helped spur broad-based job growth throughout the District and a significant tightening of our labor markets and their conditions. Many of our contacts report labor shortages and higher wage pressures. Demand for skilled labor remains very strong, and some firms have limited hiring plans because of the unavailability of qualified workers. To bolster

recruiting, a few companies have partnered with vocational schools to offer industry-specific training programs to try to fill the gap. Since our last meeting, hiring announcements, which we try to track, have outpaced layoff announcements by a margin of 6 to 1. One anecdotal piece of information—we have some fairly large engineering firms in Kansas City that build power plants globally, including in China, and also ethanol plants. Last year, one CEO told me that they hired 2,100 engineers and were unable to fill 900 positions on a global basis. So there is a lot of activity going on out there.

Construction activity remains mixed, with weakness in residential construction balanced by strength in commercial construction. On the residential side, we have seen some pickup in sales, but high inventories have limited new construction. For us, problems with subprime loans are concentrated in Colorado and in a few other areas. But because of the strength in energy and agriculture, some parts of the region are actually experiencing a housing boom, with strong home-price appreciation. Relative to the total market, that is small, but it is a rather sharp contrast. Conditions in agriculture are the best in recent years. Spring rains have alleviated drought conditions in much of our region. Strong demand and limited supplies continue to boost farm commodity prices and farm incomes. However, we are also beginning to see the effects of higher livestock and crop prices on retail food prices themselves. An additional concern is the sharp rise in land prices throughout much of our District. First-quarter cropland values in the District rose roughly 12 percent above year-ago levels, and ranchland values have strengthened as well, that much or perhaps a little more. Our contacts in the real estate industry indicate that some of the recent surge in land prices is speculative in nature, and

some District bankers have expressed concern about the bubble in farmland values driven in part by the ethanol boom that we have heard about. In recent examination reports, our supervision staff have begun to see some increases in nonperforming real estate loans, and that includes some pickup in other real estate owned as well. These developments are very preliminary, but they are reminiscent of an earlier time, and we are trying to pay a little more attention to that.

On the national outlook, data released since the last meeting support the view that growth will pick up over the year. I have been encouraged by the recent pickup in retail sales and by positive news on employment and personal income. At the same time, the recent increase in longer-term interest rates, if sustained, is likely to damp growth somewhat in the period ahead. In particular, the rise in the thirty-year fixed mortgage rate may deepen and prolong the ongoing housing slump. The combined effects of weaker growth in the first quarter and the rise of long-term rates have led me to lower my estimate of growth in 2007 to about 2.3 percent. I expect growth of 2.7 in '08 and 2.8 in '09. I now think the risks, perhaps, are roughly balanced. While the downside risk from housing remains, the outlook for other sectors, as others have reported, has appeared to improve. Markets seem to have adopted this view as well, as removal of the expected policy easing has contributed to the flattening of the yield curve at this point.

In terms of the inflation outlook, recent data have been favorable, with core CPI on a twelve-month basis down to 2¼ percent. I expect continued moderation over the year. In particular, if owners' equivalent rent continues at the slower pace of the past three months, it will help bring down the twelve-month core inflation number over time. Despite these recent improvements, I continue to believe that upside risks to inflation

remain. The possible pass-through of recent energy and food price inflation to core inflation may slow progress toward lower inflation. In addition, pressures from resource utilization and slow productivity growth, if that happens to be the case, could affect that outlook as well. Finally, I am somewhat concerned with the recent uptick in longer-term inflation expectations. We have talked about the TIPS five-year, five-year-ahead breakeven inflation rate; as mentioned in the earlier briefing, it has increased about 20 basis points over the past month. So in light of these factors, I believe it is important that we continue to signal to the markets that current inflation rates are not acceptable over the longer term. Thank you.

CHAIRMAN BERNANKE. Thank you. It is about 4:20. Why don't we take a twenty-minute coffee break and then resume.

[Coffee break]

CHAIRMAN BERNANKE. If we could resume. President Pinalto.

MS. PIANALTO. Thank you, Mr. Chairman. News from the Fourth District is little changed from my last report. The District economy continues to be weighed down by weakness in the housing market, and there is general consensus among my contacts that the housing sector has not yet seen bottom. To date, adverse spillovers from housing to other sectors of the economy have not been observed, although this remains a significant risk to the outlook.

While I have heard some reports from my business contacts that the labor market is strengthening, the official data still do not show net employment growth in the region. My projections for the national economy still call for growth to resume to a more typical expansionary pace as we move beyond 2007. My projection for GDP is slightly stronger

than what is seen in the latest Greenbook because of my assumption for slightly stronger growth in potential. Obviously, I don't make that judgment with great confidence. However, the business leaders I talk with tell me that their plans to expand capital are consistent with a pickup in productivity growth from its recent cyclical low. This includes the Cleveland Cavaliers—[laughter]—a franchise which, as many of you know, experienced a substantial productivity shortfall against the San Antonio Spurs a couple of weeks ago. [Laughter] Here, too, we are projecting a good rebound, so to speak, in 2008. In the meantime, I would like the record to show that I am making good on my wager with President Fisher. I brought with me a selection of Cleveland's finest, and I will present those to Richard after this meeting with my heartfelt congratulations. I am putting this back, because it feels funny having a beer bottle in my hand. [Laughter]

MR. FISHER. If this were the Australian Reserve Bank, it would be okay.
[Laughter]

MS. PIANALTO. I also extend my heartfelt congratulations to the Spurs on their fourth and *final* NBA championship. [Laughter] Now, turning to inflation, I am hearing reports of upward price pressures across a handful of industrial commodities, and notably for metals. But wage pressures remain modest. Nevertheless, for the first time in more than a year, I am hearing from my business contacts that they are concerned about inflation. They are bringing inflation concerns up with me, and they are telling me that they concur with the Committee's assessment that inflation remains a risk. To be sure, there were many positive signs in the May CPI report. The traditional core CPI beat expectations, and while the trimmed mean estimators that we produce in Cleveland were a little higher than the measure excluding food and energy, even those indicators were

consistent with the moderation and the longer-term inflation trend we expect to see.

Looking at the core measures enables me to be encouraged by the May CPI report. But that view is a rather hard sell to a public that saw headline CPI inflation rise 8½ percent at an annualized rate last month. Indeed, our readings of the underlying inflation trend and what people are feeling in their wallets have been at odds for many years now.

I understand that our policies are not well advised or even equipped to address transitory price movements. But at some point, large and persistent price disturbances, such as we have seen in energy markets, warrant our attention. If these isolated price pressures become more generalized and enter into consumer and business decisionmaking, we could easily find ourselves living in the Greenbook's "drifting inflation expectations" scenario.

In summary, I think the housing market still presents a risk that the economy may not resume a more typical growth trajectory over the forecast period. Nonetheless, that concern is trumped by the risk that we may yet lose the public's confidence that we are making sustainable progress against inflation. Therefore, I continue to believe that the predominant risk going forward is that inflation will fail to moderate as expected. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Poole.

MR. POOLE. Thank you, Mr. Chairman. Let me talk first about some of the anecdotal reports. A contact with a large software company suggested that the IT industry is doing fine. Labor is very tight because technical people are in such scarce supply. This company is expanding development facilities in China and India. They are not allowed to import the labor they need, and so they will send the operations abroad.

My contacts with transportation industry people get the same information that Richard Fisher is emphasizing. Movement of goods is just really, really flat. The over-the-road trucking industry is actually taking down capacity, selling off the older, less efficient trucks. In the express business, UPS is taking down capacity. FedEx is more optimistic, probably taking market share. A contact with the fast food industry says that their business volume is down. The whole industry is down. Sales revenues are up a bit, but it is because of price increases. The casual dining industry is down even more.

There is sort of a disconnect here between the overall view of the economy, I think, and the anecdotal reports that come from the movement of goods. Of course, the most cyclical part of the economy is always the goods part. The services part is much more stable. Perhaps what is going on here is simply what is also in the Greenbook's second-quarter numbers, because the goods part of the economy—consumption—is pretty flat. I think consumption is only—I forget the exact number—1.6 or something. That is an annual rate. You have to divide that by 4 to tell you what is actually going on in the quarter itself. Of course, the housing industry continues to decline. So maybe these anecdotal reports really are consistent with what is going on and what is in the Greenbook picture. The Greenbook picture makes a lot of sense to me.

Let me talk a little more about housing. The staff presentation had a point that I want to underscore—that the housing downturn is unlike any other that we have had. I think the chart went back to 1972, but you could go back before that. If you look at the housing downturns and the recessions of the 1950s, they were all related to a very standard cyclical pattern. Interest rates would rise, housing—starts, permits, construction—would start to turn down well before the cycle peak, and then housing

would start to recover after the cycle peak as interest rates came down. The current situation is completely different from that standard pattern. Here we had a housing boom driven by a period of very low interest rates. The period really got started when we were holding the fed funds rate at 1 percent. Then you had a lot of these financial innovations and subprime mortgages that added a sector to the market that hadn't traditionally been there. Interest rates came up, housing prices are flattening out, and my concern is that there is a lot more to go. This is an asset market that does not work anything like securities markets. It is completely different from the stock market and the bond market. Housing starts and permits peaked in the early part of last year, and the adjustment really got under way. But if you think about how much of the adjustment is complete—well, there is not much sign that much is complete because the inventory of unsold new houses is close to its peak. There is no convincing evidence that it is really starting to come down. We have seen some bankruptcies of builders, but not very many. A lot of banks—I know from our contacts—are putting pressure on their builders to sell out their houses and pay off the loans. The same thing is true of “the ground,” as the real estate people like to put it. Builders are stopping their development of new land for housing developments because they don't have the financing to support it anymore. The banks are starting to turn off the credit spigot because these companies are getting pretty close to the edge. They have laid off a large number of workers, but they have to sell out their inventory. Still, the number of months' supply that they are sitting on is abnormally high; it really hasn't come down. We also know that prices in this market respond with a very substantial lag to the underlying determinants of prices. So prices of existing homes are only gradually adjusting, and I think there is probably more of that to go.

We know that there will be a lot more resets of these adjustable-rate mortgages. The projections are that a lot more defaults than we have yet seen will occur in that area. So I think that we have a long adjustment to go here. Whether that will spread into the rest of the economy, I don't know. I share the Greenbook estimate that probably there won't be major fallout, but it seems to me that the risk there is significant. I just wanted to underscore that point because I think this risk is by far the biggest that we face at this time. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I would like to speak earlier next time, so I don't have to give credit to so many of the previous speakers—[laughter] including President Poole, who really said a lot of what I have to say. There wasn't much change in the Sixth District economic picture during the intermeeting period, particularly regarding things that are relevant to the national outlook. So I am not going to devote a lot of time to discussing across-the-board conditions in the District. My staff's outlook—and my outlook—for the national economy doesn't differ much from the Greenbook analysis and forecast, so I also won't detail small differences between those two forecasts. The Greenbook outlook reflects the baseline expectation of a diminishing drag on real growth from residential investment. Since our forecast largely agrees with the Greenbook, we obviously see the most likely playout of the housing correction similarly. However, as suggested in the Greenbook's first alternative simulation, we may be too sanguine. I think this is really President Poole's message about a recovery in the housing sector. That is to say, the downturn in residential investment will be deeper and more

prolonged and possibly involve spillovers. So I would like to devote my comments, in a cautionary tone, to this particular concern.

Credit available for residential real estate purchases is contracting, and the credit contraction, specifically in the subprime mortgage market, has the potential to lengthen the transition period required to reduce housing inventories to normal levels. This tightening of credit availability, along with higher rates, may affect the timeline of the recovery. One market of concern is the starter home market. The subprime mortgage market has been a major credit source for first-time homebuyers—although, as has been mentioned earlier, subprime mortgages are a small portion of the aggregate stock of mortgages. Subprimes were 20 percent of originations in 2005 and 2006, and if you added alt-A nonprime mortgages, you would get 33 percent of originations in the past two years. In many suburban areas, like those around Atlanta and Nashville in my District, much home construction was targeted at first-time buyers. We have heard anecdotal reports from banking and real estate contacts in our region that tighter credit conditions have aggravated the already sluggish demand for homes. The country's largest homebuilder—there may be a debate with President Fisher—[laughter] so one of the country's largest homebuilders, headquartered in Miami, reported on Tuesday a 29 percent drop in homes delivered and a 7.5 percent drop in average prices. But that is combined with a 77 percent increase in sales incentives. They attribute their negative sales experience to rising defaults among subprime borrowers and higher rates. That company's CEO said that he sees no sign of a recovery, and he provided guidance of a loss position in the third quarter.

Because of the major role that homebuilding—and, I might add, construction materials, particularly in forest products—plays in the Sixth District economy and because of some tentative signs of spillover, we will continue to monitor these developments in our District very carefully. As I stated at the outset, we share the basic outlook described in the Greenbook, but observation of the housing sector dynamics in the Sixth District has raised our level of concern that the national housing correction process may cause greater-than-forecasted weakness in real activity. If that is the case and inflation gains prove transitory, as suggested in the Greenbook commentary, we may be dealing with a far more challenging policy tradeoff than we are today. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. Since our last meeting, the news in the Third District economy has been mixed but, on balance, slightly more positive than the previous report. The District continues to grow at a moderate pace, and we expect that pace to continue. The bright spot since our last meeting is a rebound in regional manufacturing activity, which had been flat for the past six months. In June, the Philadelphia Business Outlook Survey index of current activity rose sharply—18 percentage points—from a level of 4.2. This is the highest level it has obtained since April 2005. The index of new orders also showed a sizable jump, and capital spending plans firmed in the survey. Respondents also expected further improvement in manufacturing activity over the coming months.

Job growth in the region, however, was somewhat slower over the past two months compared with earlier in the year, but we really didn't expect much since payrolls seemed to rise much more rapidly than expected during the first quarter. Year-to-date payroll growth

is running about 0.6 percent at an annual rate. That rate is slower than the national average but is fairly typical of our region, where population growth is rather flat. Labor force participation is rather flat as well. Unemployment rates, however, remain low in our three states, and firms still report having difficulty finding both skilled and unskilled workers.

It is no surprise, as everyone has said, that residential construction in our region continues to decline and remains weak. The value of contracts for residential buildings has fallen more than 30 percent in the region during the first five months of this year compared with last year at this time—but that, we have to remember, was near the peak. Real estate agents and homebuilders generally report slowing of sales in May. While the number of existing homes for sale on the market has increased, average selling prices have not changed much. I would characterize the nonresidential real estate market in the region as fairly firm, although construction is not as strong as last year. Office vacancy rates continue to fall, and in Center City Philadelphia, they dropped to 10 percent. They were about 17 percent just around eighteen months ago. Real estate firms report that overall demand for industrial space continues to be robust and that vacancy rates for this type of space are near record lows in some markets. Rental rates continue to rise, particularly for warehouse space, and rents are at a record high in those areas. I take these reports as indications of continued expansion in economic activity going forward.

Interestingly enough regarding building, I had two observations from CEOs. One is CEO of a building supply company that manufactures throughout the United States and has sales of almost \$10 billion. He said that, remarkably, even with what is going on with homebuilding, his sales are holding up very, very strongly and they are doing very, very well this year. Another CEO, whose company produces products mostly for residential

cabinetry and other types of things, one of the largest in the country, says that, while new home sales for his work are way down, they have largely been offset by remodeling activity—people have substituted remodeling for buying a new home.

As long as I'm reporting anecdotes here, I will pass on one other anecdote, for what it is worth, about trucking. I listened to President Fisher and President Poole talk about volumes in trucking. Just as an observation, an executive who runs a trucking company throughout the country told me that one thing that has happened in trucking is that, rather than shipping boom boxes, they are shipping iPods. [Laughter] That is true of a lot of consumer goods. Instead of shipping large CRT screens, they now ship flat panel displays. So even while the volume of goods is being reduced, gasoline prices are high, and they are laying off truckers and downsizing the volume, the value of what they are shipping has been maintained pretty well. So he was noting a dynamic of value versus volume here, which I thought was very interesting.

On the inflation front in the District, prices for industrial goods continue to increase, but retail price increases have not been widespread. However, many of our business contacts continue to express concern over rising energy costs and food prices and the effect on their businesses and the consumers. I interpret this to mean that they continue to be puzzled by our focus on core inflation when they see that overall inflation is what affects the consumer and their businesses, and they seem to doubt core inflation's value as a policy objective or a measure of underlying inflation. They may be wrong in that, but it tells me that, if they continue to be confused by how we view core inflation and what we use it for, we might need to improve our communication to the public about how we think about it and why we focus on it.

On the national level, I have become more comfortable with the economic situation as the year has progressed. At our meeting in May, we were beginning to see some positive signs regarding both real economic activity and inflation. Durable good orders were up, allaying some concerns about the first quarter's weakness in business investment. Improved ISM numbers were signaling that the slowdown in manufacturing might be ending; and although housing markets remained weak, there were limited signs of any significant spillovers to other sectors. Labor markets remained firm. At that time there were signs that core inflation might be moderating. As a consequence, I expressed hope that in the coming months those data would be reinforced.

Fortunately, from my perspective, those hopes have been largely realized. Coming into this meeting, we have received more positive news on the economy, and I have become somewhat more confident that the economy is on track to return to near-trend growth later this year as the effect of the housing correction moderates, albeit very slowly. Indeed, data received to date suggest that we will see a substantial rebound in real GDP growth this quarter, as the Greenbook has noted. After several months of stagnation, manufacturing activity seems to have picked up, and business fixed investment is moderately strengthened. Labor markets remain firm, and yet in recent quarters we have noted a seeming disconnect between strong labor markets and weaker GDP growth. However, we now may be getting some hints that this puzzle is more apparent than real, and I want to reinforce the point that President Yellen made earlier in that I think two factors suggest this. First, from December to May the household survey showed almost no employment growth whatsoever, whereas the establishment survey showed 1.2 percent annual growth during that period. Second—and again as President Yellen noted—the Business Employment Dynamics report came out.

It was only for the third quarter of last year, but it showed about 155,000 fewer jobs created in the third quarter than we thought. What is important about that report is that it arguably does a better job of tracking the birth and death of firms in the data, and so there is some reason to believe that, while this is suggestive, the payroll employment that we have been seeing may not be as strong as perhaps we thought, and that may make some of this puzzle less of a concern. Moreover, as President Yellen pointed out, it is also relevant for the longer term because, if employment wasn't as strong as we thought, productivity is going to end up being higher than we thought, and it will help resolve some of that slowdown in productivity. So I think there are various hints that that may be the direction that we are headed.

In my own forecast, I see slightly more underlying strength and so a somewhat faster return to trend growth than the Greenbook does. The current stance of monetary policy is maintained. I see strength in personal income, a strong balance sheet (as we saw earlier today), strong equity markets, and a resiliency already shown by consumers despite the lower home equity values and higher gasoline prices, suggesting that there is probably slightly more momentum in consumer spending than suggested in the Greenbook. I am modestly more optimistic about the labor market than the Greenbook—modestly, as I anticipate less of a downturn in labor force participation rates than is built into that forecast. The rise in long-term interest rates reflects the market's upgrading of its assessment of the economy's strength going forward. Indeed, as has been noted a couple of times, that uptick in long-term interest rates has been, I won't say a worldwide phenomenon, but certainly widely spread in many countries around the world, which may be saying that global growth is more stable, predictable, and positive than perhaps we thought.

Now, this is not to say that I do not see risks around this growth forecast. Of course, as everyone else does, I see housing as the biggest downside risk that we face. There is still considerable uncertainty out there, and I do not want to underestimate the risk. Housing inventories remain high, and I do not see any strong evidence of pickup in demand. Despite the problems in subprime lending markets, however, I think the financial sector remains healthy—healthier now than it was perhaps in the early '90s with the previous housing boom. I am more comfortable with the notion that there will be no spillovers into other parts of the economy, and thus I have become more comfortable with forecasts of return-to-trend growth in the second half of this year and into '08.

On the inflation front, higher energy prices have led to an acceleration of headline inflation, but there has been some improvement in core inflation measures in recent months. The three-month growth rates in the core CPI and the core PCE have been decelerating since February. Although these developments in inflation are encouraging, I remain cautious about extrapolating too much from recent data. During this cycle we have seen periods of deceleration reversed a couple of months later. Indeed, the Greenbook expects that much of the favorable readings on core PCE inflation will prove transitory. So I remain concerned that our core inflation rates may not continue their recent drift down. I would also caution that headline inflation, as I noted earlier, has remained stubbornly high. Thus, in approaching my forecast, I have assumed that the appropriate policy path was one that would return the economy to steady-state growth and to my inflation target by the end of the forecast period.

Given my outlook on the underlying strength of the economy and an inflation goal of 1.5 percent for the PCE, it should not be surprising that my forecast incorporates a

slightly tighter policy path than the Greenbook does. In particular, in my forecast the federal funds rate rises 50 basis points, to 5.75 percent, by early '08. As progress is made on bringing down inflation starting in the second half of '08, the fed funds rate moves down, ending at about 5 percent by the end of 2009. This policy path reflects my view that, unless we take further action by additional firming or an announcement or both that commits us to an inflation goal that is lower than the market currently expects, which seems to be about 2.5 percent, I believe it will be difficult to sustain an inflation rate that is in keeping with my view of price stability. I believe this can be accomplished with relatively little effect on real growth in 2008. My assumption in the model with which I'm working is that, once we begin to raise rates, the markets will quickly recognize our commitment to lower inflation and expectations will move down accordingly, mitigating the real output effects of this modest tightening. The movement down in expectations could be expedited by the Committee's explicitly announcing the target. This view of expectations formation is more heavily weighted to forward-looking elements than to distributed-lag elements of past inflation. By the way, I want to applaud the staff for their work on inflation dynamics. I thought it was an excellent piece of work. I found the discussion very helpful and a step in the right direction, both conceptually and empirically.

In any event, the bottom line for my forecast is that I anticipate that the economy will grow just below trend of 3 percent in 2008 and at trend of 3 percent in 2009, and we achieve an inflation goal of 1.5 percent by the end of the period. Of course, this forecast is based on my desired inflation objective, which may not be representative of other members of the Committee. If there were a common objective that differed from my own view, then my presumed appropriate policy path might be different. Given this observation and the

lack of an agreed-upon goal, I think we need to be concerned about how the public will interpret these forecasts, but I will save my thoughts on that for the next go-round.

CHAIRMAN BERNANKE. Thank you. Vice Chairman Geithner.

VICE CHAIRMAN GEITHNER. Thank you, Mr. Chairman. The outlook looks a little better, I think. The United States looks okay, and the world looks very strong. Housing here seems as though it will get worse before it gets better, but the rest of the economy seems to be doing reasonably well—with output and investment spending perhaps a bit firmer than we thought they would be and employment growth and income growth looking reasonably good.

We have not significantly changed our central projection. We still see an economy growing around 3 percent over the forecast period, about our estimate of potential, with core PCE inflation falling just below 2. This assumes a path for the nominal fed funds rate that is flat for several more quarters, essentially the same as in the Greenbook and in the market now. The risks to this outlook, though, have changed. We see less downside risk to growth but still believe the risks to our growth forecast are weighted toward the weaker outcomes. Although the recent inflation numbers have been good, they probably exaggerate the moderation of underlying inflation, and we see, therefore, continued upside risk to our inflation forecast. I still think this latter risk should remain our more consequential concern. Relative to the Greenbook, we have a bit more growth because of our higher estimate of growth in the labor force and a bit less inflation, but these differences are small, smaller than they have been, and they do not have significant implications for our views on monetary policy. The markets' perceptions of fundamentals have in some respects moved in our direction in the past few weeks. I say "in some respects" because we need to be attentive to

the rise in implied inflation that you see in TIPS. Our view and the markets' view of the expansion, the risk to the outlook, and implications for monetary policy have converged. This means that the effective stance of monetary policy is a little tighter than it was.

A few important issues going forward: On the growth front, I still think that the probability of weakness exceeds that of strength. There is still a significant risk that we will see a more substantial adjustment of house prices, perhaps drawn out over a sustained period of time with greater adverse effects on confidence and spending. Of course, if employment and income growth stay reasonably strong, the effects of that potential scenario should be manageable. If not, we will have more to worry about. I note that some major financial institutions are now starting to report signs of rising delinquencies in consumer credit products outside mortgages such as automobile loans and leases. This is the first time that I have heard that report in a significant sense, and maybe it is a sign of some vulnerability ahead. The strength of demand growth outside the United States has been helpful, and we agree with the Greenbook that it looks likely to continue for some time. But things could be kind of bumpy out there, particularly in places like China, and monetary policy in much of the world is only now starting to move short-term real rates higher into positive territory.

On the inflation front, it seems early to declare satisfaction or victory, not particularly because of the recent reacceleration in headline inflation but just because of the role of transitory factors in the recent moderation in core and the rise in breakevens in TIPS. We cannot be fully confident yet that a constant nominal fed funds rate at current levels will deliver an acceptable inflation forecast. We do not, in my view, need to try to induce right now a further tightening of financial conditions to push core inflation down further and faster. But we need more time before we can justify shifting to a more balanced risk

assessment of inflation or something equivalent, something that would have the effect, for example, of indicating satisfaction with current levels or of suggesting that the risks are balanced around the path of inflation that we see in our central tendency projections.

With financial markets, we are at a delicate moment. The losses in subprime are still working their way through the system. Rating agencies are likely to downgrade a larger share of past issues, more than they have already. The marks that people show indicate that both hedge funds and dealers in a lot of this stuff may still have a way to go to catch up with the movement in market prices. This dynamic itself could induce a further reduction in willingness to finance new mortgages. You could see pockets of losses in the system, liquidity pressures in hedge funds and their counterparties, and further forced liquidations. It is possible that we will still have a bunch of that effect ahead of us, even if no big negative shock to demand occurs and induces a broader distress in consumer credit. We could also see it spread to commercial real estate. We could see a broader pullback from CDOs and CLOs as well, either from a general erosion of faith in the rating models—as Bill said, it is a possibility—or from just concerns about liquidity in those instruments. We could see a sharp, substantial widening of credit spreads provoked by an unanticipated default or two or just a general reassessment of risk at current prices. A very large amount of LBO financing that is yet to be closed, distributed, and placed is still working its way through the system. As in the past, we could see a deal or two get hung, the music stop, and that force some broader repricing. People get stuck with stuff they don't want to hold or did not expect to hold. I think we now see more sensitivity in markets about the prospect of a diminished appetite among the world's savers and central banks to increase their exposure to the United States, or at least we see more sensitivity to the perception out there that the dynamic might

be unfolding. You can see a bit of all this in some spreads, in some reports of resistance to further erosion in covenants, in some reduced appetite for new bridge book exposure to leveraged lending. You can see it in some changes in margin terms in some instruments vis-à-vis some counterparties. For now I think it is a relatively healthy, still pretty modest, and quite contained shift toward a more cautious assessment of risk, but these things generally don't tend to unfold gradually. On balance, though, I think we are in a pretty good place in terms of policy, in terms of the market's expectations about policy now, and in terms of how we have been framing the balance of risks to the outlook.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. My projection was closely in line with that of the Greenbook, modestly below-trend growth for a few quarters, held down by a prolonged weakness in housing. As that drag abates, the economy picks up to potential and is held back from overshooting that potential by various factors, including the rise in the saving rate and slightly lower growth of government spending.

Under these circumstances, core PCE inflation holds in the neighborhood of 2 percent. I do not really see much to push it one way or another at this point. The economy is producing very near its potential, as close as we can figure. Inflation expectations have been moving in a narrow range. Some of the transitory factors, such as owners' equivalent rent, that we're expecting to come down to reduce inflation have already done that to a considerable extent. So I don't see them, moving forward, as having a big effect. Given the limited pass-through of energy and commodity prices into core prices, I would not expect much downward pressure on inflation from a leveling-out of those prices.

I think that we are around 2 percent and that we will probably stay there, at least for a little while.

In terms of risks, the recent data on capital goods, orders and shipments, and manufacturing activity suggest, as many have remarked, some reduced downside risk from business attitudes on spending. They do not suggest a great deal of strength in business capital spending, however. The fundamentals are less favorable than they were a couple of years ago, and the most recent data, which we received today, suggest a pretty flat or a modest upward tilt to capital spending in the second quarter. The data weren't that strong, but they do suggest that what I feared in May—that we were in the midst of a cyclical adjustment that was going to make capital spending much weaker—has certainly abated.

I agree with many others around the table that housing is a significant downside risk to the forecast, given the high level of inventories despite a major reduction in starts over the past year and the price-to-rent ratio being as high as it is. The further slide in housing may be gentle, as President Lacker said, but I do not think we've seen the bottom yet. You can go a long way at a gentle slope. [Laughter] We also have not yet really seen the full effects of the tightening in subprime credit terms or, obviously, of the recent increase in mortgage rates.

I also see a big downside risk from consumption. The Greenbook has the growth of consumption sustained despite an increase in saving rates as the growth in disposable income exceeds the growth in GDP—and that is with the labor share recovering and the business profit share declining. I see two downside risks to that. One is that the saving rate will rise faster as the housing weakness feeds through both in terms of wealth effects and in terms of reduced availability of credit as terms tighten and there is less equity to borrow

against, particularly for liquidity-constrained households. I also continue to see a downside risk to equity prices, although I have certainly been wrong so far. Nellie's table presenting the difference between the staff's forecast of profits and the market's forecast of profits showed a huge difference for next year. So though I think the basic outlook is fine, I still see some downside risk on that side.

On the inflation front, I, like others, see the better-than-expected core inflation as a hopeful sign; but it is recent and may be affected by temporary factors, and I do not think we need to get too enthusiastic about it. I do see several upside risks to inflation: the high level of total headline inflation, which could erode inflation expectations; business resistance to any erosion of profit margins as unit labor costs pick up; the high levels of resource utilization in the United States; and the tighter global conditions of demand on potential supply that others of you have mentioned.

Let me say a word or two about my year-three projections. I projected output growth at $2\frac{1}{2}$ percent, the unemployment rate at $4\frac{3}{4}$ percent, and core PCE inflation at 1.9 percent. I certainly saw my output and employment projections as a sense of what the steady state was. On the unemployment rate, I do think the odds are better that the NAIRU is lower than that it is higher than the staff's 5 percent assumption. This judgment is partly based on the very moderate pickup in the employment cost index, and average hourly earnings growth has actually been coming off recently. On the behavior of core inflation, I don't see much evidence that we are significantly beyond potential now, although I recognize that, with a very flat Phillips curve, it could be a long time before one figures that out. But I had growth of potential at $2\frac{1}{2}$ percent, which is below what I infer to be the central tendency of the Committee.

Regarding my reading of the decline in productivity growth, productivity over the past five quarters has been growing significantly below the staff's estimate of 2½ percent. Some of it is cyclical. There could be a revision, as Presidents Plosser and Yellen have suggested. I confess to having asked David Wilcox about this at the break, and he said that the data are kind of ambiguous here and that it is much too early to predict a significant downward revision to employment. But I hope you are right. Now, some of the recent slowdown certainly must be cyclical, though I would have thought that labor hoarding and things like that would be much less in today's flexible labor markets, with so much more use of temporary workers than there has been in the past. I would think that the cyclical effects on productivity would be muted, that businesses would move pretty promptly to adjust their labor forces to output. So I wonder how much cyclical there is. The big uncertainty is in the construction industry and in the fact that construction employment hasn't come down. We don't quite understand why it hasn't come down more. So perhaps productivity will pick up.

But I still would look at the staff's 2½ percent as having even just a little more downside than upside risk to it, given the fact that we have had more like 1 to 1½ percent in the past four or five quarters. So I stuck with the staff's forecast of 2½ percent potential GDP.

In some sense, our view of what the potential growth rate is isn't all that important for monetary policy. We ought to be looking at the gap. We ought to be looking at the pressure of the level of production on the level of potential GDP. But I don't think it's quite that easy. We don't know what that gap is. We have seen that the surprises over the past year or two have been in the behavior of the unemployment rate and capacity utilization

relative to growth. So we do tend to look at our estimates of potential growth and the actuals coming in relative to those estimates and pass judgment on what's happening to the output gap even when the unemployment rate doesn't move. We just need to remember that potential growth is an entirely estimated number that we will never observe, and we need to be aware that it might not be quite as high as the central tendency indicates that my colleagues on the Committee apparently think it is. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Regarding overall economic growth, my own macroeconomic views are not inconsistent with the central tendency of the projections that were pulled together for this meeting. I think the staff and the participants around the table deserve significant credit for being stubborn about the moderate-growth hypothesis while markets have been on all sides of it. The markets appear ready to look through the second-quarter GDP growth number, which appears to be a bit above trend. I'd say that we have gotten some credit from the markets for being stubborn and stubbornly right on our economic forecast, but they certainly haven't given us their proxy, and I would not expect them to do so. They happen to share our views for now is what I would say, and I wouldn't expect that situation to remain over the forecast period. Again, neither should our intention be to somehow get these curves to match over the coming several quarters.

On the inflation picture, though it has improved a bit—and I am trying not to disregard very good news—I must say that it strikes me as thoroughly unconvincing. To me, inflation, in our old statement language, remains the predominant risk. I am less certain that core will continue the recent trend. I do believe that headline inflation may be telling us something in terms of secular trends around energy and food that we can't dismiss, and the

warnings from some of the other signals that we would see as rough proxies for inflation are still very real.

Regarding what the financial conditions are telling us about growth, it strikes me that, from all the data we have received between our last meeting and this, financial conditions might be as different as any other sets of data that we received. My view is that financial conditions are still supportive of growth, but somewhat less so. It is hard to determine at this point how much, but let me take a stab at doing just that. Since we last met, as Bill said at the outset, we witnessed ten-year Treasury yields increase on the order of between 30 and 50 basis points. I am not uncomfortable with that incremental tightening of policy in the financial markets, but we have to be careful of what we wish for. I think the explanation from our staff here in Washington and Bill and the staff in New York is right, which is that markets have not come to a rosier view of the future. All they have really done is to take out the downside risk that came out of the first quarter. As the data came in a bit above expectations, that insurance bet that they had—that we were wrong and would have to cut rates—really lost credibility. I think their central view of the economy now is not one that roars back but one that is quite consistent with the moderate growth story. The financial markets have indeed tightened policy somewhat. Even since the time that the Bluebook was produced last week, spreads have apparently widened in addition to the risk-free rate being somewhat higher. But this is all happening in very real time, and my report a week ago would have sounded quite a bit different from the one today.

We have witnessed increased term premiums and greater volatility across many, if not all, financial markets. Both the MOVE index for Treasuries and the VIX for equities are high relative to the averages of the past year but are still fairly reasonable over a somewhat

broader period—say, the last five years. Term premiums I would characterize as returning to more-normal levels—but, again, not out of line with history.

We have seen in the Bluebook that credit default swap (CDS) spreads and other spreads had widened, but that yet hadn't happened in the high-yield market, where apparently there was some narrowing of spreads. That has changed rather dramatically in the past four or five trading days. I'm sure Vince will share more information on this tomorrow. But the CDS spreads really occurred first; then there was a lag to high-yield spreads. In the past two weeks, investment-grade CDS spreads have widened about 7 basis points, high-yield CDS spreads have widened about 20; a relatively new index of loan CDS spreads has widened about 65 basis points; and most, if not all, structured products, even assets wholly unrelated to the housing markets, have been undergoing some spread widening. As I mentioned, high-yield spreads appear to be catching up to CDS spreads, and with the incredible flow of deals in the market, I would guess that the trend continues. We're seeing higher financing costs and slightly tougher terms for LBOs; the latter is a remarkable new development. M&A prices, probably for the first time since I have been sitting at this table, appear in the markets to be coming off their levels. So when auctions for properties of publicly traded companies are occurring, the price between initial indications of interest and final bids for the first time may actually be coming down.

Why is that? Interest coverage ratios cannot go much below where they have been in this cycle. It is 1.2 or 1.3 times, but again, as the risk-free rate has gone up, as spreads have widened, you can buy just a little less debt for that. As a result, equity players that do not want to compromise their equity returns can pay a little less for these properties. Whether this phenomenon is very short term, like the phenomena we heard about after the

tumult in late February and we returned to in the heady days of the capital markets, I do not know. This may just be a temporary preference shift toward quality and toward higher volatility and a return to the “glory” days, but I tend to think not. It is a tough call, and I reserve the right to change my judgment.

I think that the new supply that’s coming into the markets, most of which needs to get priced before the markets slow down in August, will test the markets’ resilience, will test prices, and will test terms. Up to this point we have seen very little reduction in liquidity, but we are seeing a few deals being pulled from the market. Pricing power appears to be coming back to investors, and negotiations around prices and terms seem significantly more balanced than they have been in a very long time. Some of the instruments that we have sort of giggled about around this table—the pay-in-kind notes with optional cash payment—seem to have lost some traction in the market in the past week. I do not know whether they will return, but I take this new discipline in the markets as an encouraging sign. So what is going to be the resulting effect on prices, terms, and conditions? That is something we will have to judge; but financial conditions, as I said at the outset, are perhaps somewhat more restrictive than they were, but they should still be quite supportive of growth.

At the outset I talked about the risk on the inflation front. Let me build on a couple of remarks that Vice Chairman Geithner made about risks now in the financial markets. If the problems that we have seen around structured products that have come out of the Bear Stearns scenario are really about the subprime markets and subprime collateral and housing, there’s not much to worry about. But to the extent that the story is really about structured products—products that have not been significantly stress-tested—then there is a risk that the financial markets may react and overreact. That scenario will bring up reputational risk

issues. Even financial intermediaries that are in the agency business are relearning the lesson that agency business is not free—that there are, in fact, dissynergies from being in the principal investment business and the agency business under one marketing name. We are learning a lot about what the markets believe about the transparency of prices, particularly in times of financial distress. Of course, in times of distress, the correlations among all these assets do not look as they do in models, and that is something that will play itself out. I think that Tim rightly referenced the role of gatekeepers in the credit agencies, who I suspect are going to have a fairly rude awakening over the next six to nine months. As I also said, regarding this financial innovation, which on net is of great benefit to us, we will really see some of the products tested. Along with the products, moreover, the market participants' behavior will be tested, perhaps in this upcoming period, as never before. So the financial markets are a friend on this, but there is greater risk than there was when we last met. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thank you very much. The last time we met, there seemed to be a bit of increased uncertainty about a potential downdraft on economic growth, and now some of that concern about that downturn seems to be no longer there. Some intermeeting data have come in a little more on the upside, and obviously the markets have changed their expectations and seem to agree with that. I think the strength in the labor market and in consumption, although facing some challenges, is still at a reasonable level. It does seem that we are getting some signs that investment is coming back.

Recent durable goods numbers, which came out today, perhaps raise some questions of that. We have had a couple of good months and now a bit more of a challenge. But

when you smooth through, I think, exactly as Governor Kohn suggested, that we'll have moderate growth going forward, a forecast that I think is consistent with the Greenbook forecast. Strength in nonresidential construction, as we have heard around the table, has also provided us with a bit more optimism for investment in general. But investment is obviously closely tied to where productivity is going because, if we don't have investment, particularly in the high-tech areas rather than just in the construction sectors, it is going to be hard to sustain high productivity growth. When we get the revised numbers on July 27 and we also get advance GDP, we're going to get a lot of information about that, and I think there is still a lot of uncertainty as to exactly where productivity is going. So I will defer my comments until the next meeting because we will have those numbers by then.

Regarding consumption, we have been having the offsetting wealth effects of the recently robust equity asset market and much less robust housing asset market, continuing strength in the labor market, and as the Greenbook points out, increasing disposable income because we're having incomes grow faster than productivity growth, at least right now. That suggests that we might maintain a reasonable support for consumption growth, but again, as Governor Kohn said, there are potentially some challenges here.

But now I want to discuss the big challenge that everyone keeps talking about, which is the housing market. It has become obvious that the transition is going to be quite a long one and potentially a painful one, perhaps more in individual pockets and for individual families than for the macroeconomy. It will not just disappear after the third quarter of the year or even the fourth quarter of the year. I would think in four different ways about how housing can have a broader effect on the economy.

First is obviously the direct effect on prices. The Case-Shiller ten-city index suggests that the prices will fall about 3 percent over the next year. Now, that's roughly where the market was just before the issues in subprime arose at the end of February, and it is actually better than it was last fall. So the markets don't think that there will be an enormous challenge with respect to prices, at least in these ten markets. But as President Poole mentioned, sometimes the prices even in these improved indexes, like the Case-Shiller index, may lag what's going on and may not accurately reflect the underlying actual values that people can realize. So there still may be more challenges even though the index suggests that house prices are down only 3 percent. It is also interesting to look at the delta, the change in the index. We haven't really seen much from that, which I think is heartening, but it is still something that we have to watch out for.

Second are the indirect effects, the wealth effects. As I mentioned, there have been offsetting wealth effects from the equity markets and the housing market. More broadly, there can be confidence effects on spending and on saving behavior. So far we haven't seen a lot of evidence of that. As Vice Chairman Geithner mentioned, there have been anecdotal reports of challenges in other areas of consumer credit, although so far no real systematic data suggest that. Even if there is a little movement up, in almost all the typical indexes we use, many of which were mentioned in the briefing, we are at lows or are much lower than usual historically. So even with the small movement up, there are not necessarily enormous challenges; but these effects also have to be watched.

A third very important potential effect of this long transition is a response by us or by lawmakers that could make the transition even longer and more difficult. As a number of you know—and all of you have been facing pressure on some of these things—we will be

putting out the subprime adjustable-rate mortgage guidance that we put out for comment just at the end of February. Our timing couldn't have been better for getting that out—we did it just as the problems were becoming more of an issue publicly. I hope the guidance will be out by the end of this week. We are proposing guidance that subprime adjustable-rate mortgages have underwriting at the fully indexed rate. I do not think that's going to be much of a shock to the markets. The markets have largely moved there already. This was true from some early statements by Freddie Mac and Fannie Mae. Also, some of the major players who were not underwriting at the fully indexed rate are simply not there anymore—they are bankrupt—and some of the other players who were not doing it have changed their standards. As we know from the survey of senior loan officers, standards have been rising. That is not to say that it won't have some effect, but relative to where the market has already moved, the effect is not going to be significant.

The other major guidance is for giving a prepayment penalty grace period of sixty days so that people will have at least sixty days before the reset to refinance their mortgage. It's unclear from the studies we have done at the Board and from looking around how much of an effect that will have on the initial rate or the so-called teaser rate. It seems that changing their ability to do that from zero to thirty to sixty days is unlikely to have an enormous effect on the teaser rate, but that is something that is uncertain. There are some states that already outlaw prepayment penalties or have restrictions on them. There is not a lot of evidence suggesting that it is more difficult to get financing in those states. Again, these guidelines are untested, but I don't think they will have an enormous effect on the market, but they are obviously something to watch.

As you well know, we have put out an interagency letter suggesting that servicers and lenders work very closely with distressed borrowers to try to work things out and keep people in their homes. Doing so is in the interest of the people in the homes; it is virtually always in the fiduciary interest of the loan servicer and of the lender. I think we have been making progress on accounting issues that have been making it difficult for some servicers to do this, and we are working very closely with the SEC and with FASB on some of these things. We may be making progress in giving comfort to the servicers who want to do some restructurings that would help keep people in their houses and would ultimately be better for the individuals and for the owners of the securities. We have also had the HOEPA hearings here in which we talked about the potential for rule writing in several areas, such as requiring escrow for taxes and insurance, some regulation or restriction of prepayment penalties, and various other things. That would be down the line, but again, we are thinking that this is unlikely to have a major effect relative to where the markets have already moved.

Fourth and finally, there has been a lot of interest in the effect of subprimes in the housing market not only on the mortgage market but also more generally on the financial markets, as Governor Warsh and Vice Chairman Geithner pointed out. Fortunately it seems that liquidity is largely being maintained in the mortgage origination market. There are still fairly robust amounts of subprime and alt-A originations occurring. They obviously are going to be declining over time because there are fewer being made; but they were at an unusually high level in 2006, and so it's a natural part of the transition process that they would go down. There has been a very significant increase in spreads, as has been mentioned by the previous speakers, and there's much more tiering of risk. It is not just that the Bs are all the same; it is where they originate. The markets are looking through the

packages to see what's in them, which is very, very valuable. Increased volatility and higher pricing in these markets and the higher long-term interest rate will be a bit more of a challenge for people doing refinancing, although we're now down to about 5.08 for the ten-year, off 20 to 25 basis points from the high of the other week, and so it may not be quite as much of a challenge. But there is also a legal risk in this market because, if some problems become larger, there could be concern about what the new instrument really means and what you have actually purchased. If legal risk is there, the markets will start to run away from these things. Then you may have some severe liquidity problems. I do not think that we see those challenges yet, but it is one indirect effect on the financial market of some of these issues.

Just quickly on inflation—most people have said that we've seen some moderation. It is a little too soon to declare victory. As we said in the initial briefing, when we drill down into the components and look at owners' equivalent rent, we may get some nasty surprises going forward. Some numbers have gone down, but owners' equivalent rent may come back up a bit. So I don't think we can say that the temporary elevation in that area has passed and that we can move on. I think some challenges are still there. Fortunately, expectations still seem reasonably well contained. But I think that there may be some challenges going forward as the economy continues to grow at least at a moderate pace, and some of the temporary factors are not necessarily completely behind us. We still have to look for potential price pressures going forward. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. Thank you. My view of what has been happening in the economy is that we have been basically going through a rebalancing. We had a sector that was clearly

bubble-like with excessive spending, and now we are getting the retrenchment, which is taking a bit longer than we expected. But the good news is that we are going through a rebalancing in which we are just moving resources to other sectors and that is actually going much along the lines that we want to see. The problem in a rebalancing episode is that you are always worried about the risk that is possible because these transitions don't always occur smoothly. I think that we were much more worried about that—at least I was more worried—at the previous meeting. But we have been seeing that the rebalancing is actually going along pretty well. In particular, although the housing market is very weak, very much along the lines of the Greenbook forecast, it hasn't surprised us this particular period. It's just that it is pretty bad. But the risks are actually fairly balanced on housing because we do not see it as very strong and that is part of the process of undoing the previous excesses. Another very important thing is that we have not seen any surprising spillovers from the housing market. As time goes on and nothing really bad happens, we become more confident that, in fact, the downside risk isn't there either. We have also seen that the investment sector has been looking a little stronger. Again, that really did concern me at the last FOMC meeting. Yet we have had some reasonable numbers; they are not spectacular, but I think the downside risks have dissipated.

So the bottom line is that I see the economy as rebalancing and doing it in a fairly good way. In fact, from a long-run perspective, this is a good thing and not a bad thing. The downside risk has dissipated, and the risks are now quite balanced. So I am quite comfortable with the Greenbook forecast on this, which is that we have growth somewhat below trend but moving back toward trend, and I see that there has been a shift in a positive direction and the risks are not excessively on the downside but are much more balanced.

When I look at the inflation picture, I am in a way pleased with the recent numbers because there is no strong indication that we are far from potential output and, in particular, there is a little indication that the tightness in the economy certainly will be unraveled. According to our forecast, not much is going on in that area, so what's going on in inflation expectations will be dominant. I mean, given that inflation expectations have been pretty well anchored around 2 percent, although there is some uncertainty, I thought that we would have a return to 2 percent numbers a bit more quickly than the original Greenbook forecast showed. I was really pleased because the Greenbook has basically moved closer to the picture that I had all along; so now I'm very comfortable with the Greenbook forecast.

In contrast to some other people, I think the risks are pretty balanced. Now, maybe that is not really different because of the people who have inflation going below 2 percent, and I don't see that. So I believe it's going to be 2 now and it's going to be 2 for a while unless we make a concerted effort to change inflation expectations. Then there is the whole issue of how we might go about doing that. But given the current environment, my view is that risks are fairly balanced. Other people are saying that there is risk on the upside, but I think that's because they just have slightly lower numbers regarding where they think inflation will be. But probably when we look at it from that perspective, it is about the same. So right now I think the economy is evolving in a pretty reasonable way, and I'm sure we will be surprised in one direction or another in the future. Thank you very much.

CHAIRMAN BERNANKE. Thank you, and thanks to everyone. Let me try to give a quick summary, and if I misrepresent you, please let me know. Participants' expectations for growth were varied, but most people expect to see strengthening over the remainder of this year and into 2008 and 2009. The principal source of downside risk is housing, which

remains weak, perhaps in part because of problems in mortgage markets. However, significant spillovers have yet to emerge from the housing situation, and other components of demand appear to be strengthening and thereby offsetting the drag from residential construction. A number of participants referred to the strength of the global economy, which is stimulating U.S. exports but also leading to increases in costs of energy and metals. Investment has picked up from a bit of a pothole and is growing now at a moderate pace with particular strength on the commercial real estate side. Inventories are mostly aligned with sales and manufacturing seems to be strengthening overall. Consumption seems likely to grow at a steady but not exuberant level, with factors such as gasoline prices and slower house appreciation creating some drag but strong employment and incomes acting as supports. Indeed, the labor market continues to be strong, although there are some measurement issues that were noted, with unfilled demands for highly skilled workers and with some signs of wage pressures. Overall, the risks to output seem roughly balanced around the path of a gradual increase in growth.

Participants did note the increase in long-term interest rates, which tended to align market policy expectations with those of the Committee. Higher long-term interest rates and some other changes in financial markets may be slightly restrictive but probably not substantially so. Some also noted risks in financial markets, including the aforementioned risks associated with the subprime sector, but also more-general concerns about structured credit products and the possible effects of a decline in liquidity. However, I would note also, as some others did, that a bit of cooling in the financial markets might not be an entirely bad thing.

Recent core inflation numbers have been favorable, and most of you see continued moderation in inflation resulting from mildly restrictive policy, the ending of some temporary influences, and slower increases in shelter costs. However, a few of you have suggested that some of the recent improvement in core inflation is transitory, and they noted upside risks, including resource utilization, possible pass-through from energy and commodity costs, slower productivity growth, and the possible effect of high headline inflation on inflation expectations. High capacity utilization—and “globally,” President Fisher—is also a source of possible inflation pressure.

GOVERNOR KROSZNER. Is President Fisher a source of inflation? [Laughter]

MR. FISHER. Only rhetorical inflation.

CHAIRMAN BERNANKE. All in all, there still seems to be general agreement that the risks to inflation remain to the upside and remain the predominant concern. Is that a reasonable summary? Are there any comments?

Let me present just a few essentially random thoughts at this point. First of all, from my perspective, the biggest puzzle about what’s happening is the behavior of the labor market, which is continuing. We’ve had slow growth. Unemployment is at least not falling anymore, but it remains stable at a fairly low level. My scenario for the soft landing plus some moderation of inflation involves some cooling of the labor market from here. I still think it will happen, but admittedly, there is only the slightest suggestion so far that it is happening. In particular, we have not yet seen the decline of construction employment, which I have continually referred to and continue to expect. There have been a number of discussions about why we haven’t seen that response yet. Some have noted the possibility that a lot of the workers are undocumented and, therefore, are not being counted by the usual

measures. However, they seem to have been counted when the market was expanding. So it is a little puzzling why suddenly they are not being counted. Thus I still think there will be some moderate softening in the labor market over the next year. If that does not happen, then we will be at some risk of higher upside growth than we anticipate and higher inflation pressures than we anticipate. So for me that is a central thing to look at. I think in talking about this, it is important to note how uncertain we are about what the natural rate of unemployment is and that entire concept. Judging from the FOMC's 2009 projections, most of us think that the natural rate may be a bit below 5 percent, and I would note that the unemployment rate was in the mid to low 4s for four years in the late 1990s and has been in that range now for about two and one-half years. So it is not entirely evident where the natural rate is, and it does make some difference obviously. Again, I expect to see some moderation in the labor markets, and I believe that is critical to our scenario.

Like everyone else, I think the housing situation continues to involve downside risks. I would reiterate what President Poole said—that this is an asset market; that therefore price changes are inherently, at least to some extent, unpredictable; that a lot is going to depend on confidence, which is going to depend on results, which is going to depend on confidence; and therefore, that we need to be very careful, just the same as with inflation, about declaring victory too soon on the housing front. In particular, there is an interaction between the mortgage market and financial markets. There has been discussion of that already today, but there is the potential for some trigger to lead to what would amount to an effective tightening in financial markets, which would affect not only housing but also potentially, for example, corporate credits. Although that remains just a risk, I think it's one we need to keep in mind.

I agree with the general view around the table that, except for housing, the economy looks to be healthy. Capital spending is not going gangbusters, but it does seem to have come back to some modest trend. I also agree with what a number of people said about the strength of the world economy. We shouldn't get too carried away with the export sector. What we're hoping for here is that net exports will not be a net drag on growth. [Laughter] Nevertheless, that is an improvement over the past, and the strong world economy should on net be helpful to our economy.

Like everyone else, I'm encouraged about the incoming inflation data. I agree that some of these good numbers may be partially transitory. However, when you analyze this, there has been a decided step-down in the past three or four months in the shelter component. I would make two observations. One is that, excluding shelter, core PCE inflation is now at the lowest number since the end of 2003; if the shelter numbers of the past three months were to persist, then that would automatically arithmetically give us some additional progress on inflation. Now, that may not happen. Clearly we have month-to-month variations, as we have mentioned many times; but I think some slack could combine with some more moderation in rents. On the inflation expectations issue, I thought David Wilcox's graphs were very instructive. I do very much believe that inflation expectations influence actual inflation and that the anchoring of inflation expectations is very important. But I don't think they're anchored at 2.000; I think that they're anchored at a general range somewhere around 2 percent. What David's graph showed was that the level of expectations that we observe seems also to be consistent with 1.8 or 1.7. So I don't think that's an absolute barrier, though I concede that expectations play an important role. Two, I would also just comment about the statistical issue. I was among a number of people who

talked about the statistical significance of the change in inflation that we have seen and noted that these month-to-month changes are subject to a lot of variable shocks. But let me just say that I think it's probably worth noting that, in the classical statistical significance tests and everything we're doing here, we're Bayesian decisionmakers, and we're trying to make a decision based on our best estimate of where we are at a given moment. Even if we concluded that inflation's decline is not statistically significant in a classical sense, we still ought to act as if there has been some decline in inflation. As a thought experiment, I would ask what we would be saying now if we had gone up 0.6 percentage point from where we were in May. I think that would have led to a somewhat different tone around the table. So while acknowledging the statistical variability and the transitory nature, I think that there has been some improvement and that it is showing through into our thinking about the economy.

One last thought—a number of people have mentioned the distinction between core and total inflation. I agree that our communication on this issue really needs some work. I was just in Chicago, and several people, including directors and employees, asked me, “Don’t you guys drive? Don’t you eat?” [Laughter] Clearly, we understand why we do this, but I think we need to improve our communication on that particular front. That’s a little segue into what we’ll be talking about tomorrow. So if you will bear with me—I know it is six o’clock, but I’d like to ask Vincent just to give us a brief introduction to the monetary policy discussion we’ll be having tomorrow. That will save us some time tomorrow and give us a chance to think overnight about the subject.

MR. REINHART.⁴ Thank you, Mr. Chairman. Two personal notes to start: First, I am the last person between you and British food, which means that I’m not sure whether it is in your interest for me to speak quickly or slowly. [Laughter] Second, this week marks the first anniversary of the Committee’s last policy action—the quarter-point firming that brought the federal funds rate to 5¼ percent. Paper is the traditional

⁴ Material used by Mr. Reinhart is appended to this transcript (appendix 4).

present, and my gift to you is the material labeled “FOMC Briefing on Monetary Policy Alternatives.”

The intermeeting period saw considerable upward revision to investors’ expectations for the setting of monetary policy. As the shift from the dotted to the solid line shows in the top left panel of the first exhibit, the path of the expected federal funds rate rotated up, posting increases of 15 basis points at the end of this year and about 50 basis points by the end of next year. The starting point for both the May 8 and the June 26 lines, though, is the same: Market participants continue to believe that you will keep the federal funds rate at $5\frac{1}{4}$ percent at this meeting. Judging by the Desk’s survey of primary dealers, you are also expected to keep the wording of the statement mostly intact.

Not much of this rise in market yields occurred in narrow windows surrounding the release of economic data and speeches by monetary policy makers. Rather, the economic data, which ran somewhat stronger than anticipated, and Federal Reserve communications, with the steady repetition of the assessment that upside risks to inflation remained, seemed to induce a rethinking of the economy’s prospects and the attendant need for monetary policy support. This rethinking is most evident in the middle left panel, which shows that the latest primary dealer forecasts of the federal funds rate at year-end (the blue bars) have shifted notably compared with the survey forecasts just before the May meeting (the dashed line).

The revision to investors’ views was associated with the increase of 20 to 50 basis points in the nominal Treasury yields plotted in the right panel (and seen as the shift from the top dotted black line to the solid black line). The pricing-out of near-term policy ease probably explains the now-shallow portion at the front part of the yield curve. The rise in nominal yields can mostly be attributed to an increase in real yields of 30 to 50 basis points, shown in the lower portion of the same panel. Our term-structure models suggest that virtually all the rise in real yields is due to fatter compensation for bearing risk. Because the shifts in the two sets of yield curves did not match, the spread between the nominal and the indexed yields, which measures inflation compensation, widened somewhat at longer maturities. Here, too, the models suggest that some of that larger gap reflects a higher risk premium—this time for bearing inflation risk—leaving their estimates of inflation expectations only modestly higher.

In recent days, concern about risk-taking, brought into the spotlight by the problems of two hedge funds managed by Bear Stearns, reversed some of the upward tug of yields imparted by the revision to the outlook for the economy and policy. As can be seen in the bottom left panel, the cost of credit protection for subprime mortgage pools packaged over the past $1\frac{1}{2}$ years has risen over the past few weeks as the fear of a fire sale of the collateral seized by lenders to the Bear Stearns funds depressed prices and raised concerns about a more general spillover to other entities and markets. These fears also seem to have set off flight-to-safety flows that pulled Treasury yields lower in recent days. As noted in the table at the bottom right, the

ten-year Treasury yield had risen about 50 basis points from the May meeting to when we put the Bluebook to bed (the first column). The outbreak of skittishness in recent days trimmed several basis points off that run-up (the second column) and put equity prices into the red. I wonder if the recentness of these events, which unfolded after much of the staff briefing work was wrapped up and your own interventions were mostly written, means that they have not been completely incorporated into your outlook. If so, this nervousness in financial markets probably adds to the list of reasons for keeping a low profile in your policy action at this meeting by ratifying prevailing expectations—that is, to choose the unchanged policy stance of alternative B in the Bluebook.

Some of the other reasons are the subject of exhibit 2. In the staff forecast, summarized in the top left panel, output growth runs a bit below that of its potential in the near term, and inflation settles in at 2 percent. If you find that both a plausible and an acceptable outcome, you might also align yourself with the policy assumption of an unchanged federal funds rate upon which that forecast is based. Moreover, you were satisfied with keeping the funds rate at $5\frac{1}{4}$ percent at your May meeting. If you have filtered the incoming economic information in a manner similar to the staff—seen in the Greenbook as a slight upward revision to the growth of real GDP and a slight downward revision to core PCE inflation—you probably also believe that circumstances have not changed enough to warrant a recalibration of policy. It is true that financial market restraint has ratcheted up somewhat as investors' forecast of the federal funds rate path has risen—proxied in the top right panel by the year-end expected federal funds rate in futures markets—but the staff expected this to happen over the next year or so, which has been a sentiment shared by some of you at the past few meetings. The adjustment in financial markets over the intermeeting period now brings market pricing into better alignment with the Greenbook assumption—shown by the black dots—and that this adjustment took place on a more compressed schedule than expected should probably not make for a material change to the outlook. As seen in the middle panel, the current real federal funds rate, at $3\frac{1}{4}$ percent, matches the Greenbook-consistent estimate of its equilibrium level. That is, if maintained, the current real rate would be consistent with the output gap closing within three years, at least in the Greenbook outlook. An unchanged nominal funds rate at this meeting is also consistent with many policy rules, including an estimated one that captures your practice over the past twenty years and that is plotted as the solid line in the bottom left panel. Of course, if you take into account forecast uncertainty, as is done by the light and dark green regions, you can pitch a pretty large tent with such policy rules. There is less doubt about the course of monetary policy in financial markets. As shown by the red bars at the bottom right, options on Eurodollar futures imply a distribution for the federal funds rate six months from now that is tightly clustered around the current setting. Here might be another reason for keeping the fed funds rate unchanged today: For all this year you have been hinting that prevailing market expectations for the fed funds rate were too low. Now that market participants have adjusted in your desired direction, you might not want to surprise them.

Many of you noted that problem with the version of table 1 that circulated in the Bluebook, a subject discussed in exhibit 3. In the May statement, inflation was characterized as “somewhat elevated,” as in row 3 of the left column. But favorable data since then have put the twelve-month change in core PCE inflation at 2 percent, a level that some of you might find tolerable. As yet the Committee has not spoken with one voice on the subject. We dropped that contentious phrase in the Bluebook and softened the balance-of-risks language as well. As a result, the release of the wording in the Bluebook version of alternative B would likely trigger a decline in money market yields. The new version of alternative B in the right column turns the heat back up somewhat by inserting in row 3 words to the effect that the Committee is not convinced that the present step-down in inflation will persist. This draft also makes clear in row 2 that the characterization of recent economic growth is based on the first half of this year and returns the language in row 4 to that used in the May statement.

Even if you are willing to keep the funds rate at $5\frac{1}{4}$ percent for now, you might foresee policy action sometime soon, in which case the changes to the statement probably do not represent your views. In particular, as shown in the top left panel of exhibit 4, the unemployment rate (the red line) has bounced around $4\frac{1}{2}$ percent for almost a year. If you believe that this represents a taut labor market, you may be concerned about inflation pressures, particularly given that the manufacturing sector seems to have gone into a higher gear, as shown by recent readings on the ISM’s new orders index, the black line. You might not be alone in being concerned about inflation prospects. As plotted in the middle left panel, five-year, five-year-forward inflation compensation has risen 30 basis points from its recent low. It might be noise, it might be a wider risk premium, or it might be increased inflation expectations. If it is the last, you may want to position yourself now for policy firming sometime soon on the theory that an early demonstration of your displeasure with a rise in inflation expectations will effectuate a less costly decline. Some suggestions for doing so were offered in alternative C in the Bluebook, a few highlights of which are given in the bottom left panel. In particular, the alternative C draft reverses the order of the description of economic activity in row 2 to downplay the qualification “despite the ongoing adjustment in the housing sector.” More important, it retains the judgment that “core inflation remains somewhat elevated” and gives more reasons that inflation may come under pressure. If you have a frame of mind favorable to finer shades of meaning, you can always try dialing down the modifier of elevated inflation from “somewhat” to “slightly.”

More substantial changes might be required if you are inclined toward alternative A, arguments for which are shown in the right-hand column. Regardless of the reason behind the run-up in market yields, households borrowing to buy a house now face higher mortgage rates (as shown in the top panel). This may both dissuade potential new purchasers of homes and disappoint those households that were hoping to refinance on more-favorable terms as the lock-in periods on their extant ARMs end. Both will act as a drag on spending and perhaps more substantially so than in the staff forecast. Months’ supply of new homes, plotted in

the middle right panel, has edged higher. The staff projection has the feature that the efforts of builders to bring inventories back into line will be a drag on production for some time but that residential investment will begin to turn up by the second half of next year. However, this is a projection, and if you are more pessimistic on that score or want to give greater weight to downside possibilities from a risk-management standpoint, you might want to show some leaning toward policy ease in the statement. The language of the draft statement in alternative A may do so. As summarized in the bottom right panel, that draft pointed to “ongoing weakness in the housing sector” in row 2, excises the reference to “somewhat elevated” inflation in row 3, and moves the risk assessment to balance in row 4.

The pieces of what I have just been talking about have been put together in your last exhibit, which represents an ever-so-slightly revised version of table 1 that circulated on Monday. In particular, in row 3 of alternative B, the word “sustained” has been inserted in the middle sentence to raise the bar as to what it takes for the Committee to be convinced that inflation has moderated. That concludes my prepared remarks.

CHAIRMAN BERNANKE. Are there any questions for Vincent? All right. If there are no questions, then we’ll adjourn. We’ll see you at the dinner, and we will begin at 9:00 a.m.

[Meeting recessed]

June 28, 2007—Morning Session

CHAIRMAN BERNANKE. Good morning, everyone. The GDP figures came out this morning. David, would you like to comment?

MR. WILCOX. Thank you, Mr. Chairman. The BEA published this morning their so-called final estimate of GDP for the first quarter. Top line came in slightly lower than we had been expecting in the Greenbook—0.7 percent compared with the 1 percent that we had been expecting. There were small misses in a smattering of categories, including equipment and software investment, net exports, and inventories. Our snap reading, though, is that this release will have little, if any, implication for our outlook. What we lost in the first quarter in inventories, for example, we might be inclined to regain in the second quarter in our projection. So we think that our projection for real activity will not change as a consequence of this release. We did get the upward revision to core PCE prices that we had been expecting on the basis of the revision to the PPI for medical services. Core PPI was revised up from 2.2 to 2.4 percent.

MR. KROSZNER. Core PCE.

MR. WILCOX. Excuse me. The core PCE price index for the first quarter was revised up, exactly as we had been expecting on the basis of the PPI revision. Thank you.

CHAIRMAN BERNANKE. Are there any questions?

MR. KOHN. May I ask, Bill, whether there has been any reaction in financial markets to this?

MR. DUDLEY. I think that people are taking this in stride. The first quarter is old news.

MR. KROSZNER. So, on your estimate, what we will be seeing tomorrow when we get the details on prices will be in line with what you have been expecting? There was nothing here to make you change your view of that?

MR. WILCOX. We don't know the details of what we will get tomorrow, but there is nothing here to condition our expectation any differently from what we had before.

CHAIRMAN BERNANKE. Okay. We are well advanced in our deliberations here. We heard from Vincent yesterday on the action in the statement, and so we are prepared for the go-round. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I think what I heard yesterday was consistent with what I was thinking myself. We are in a pretty good spot, macroeconomically and policywise. We have moderate growth; low core inflation, which is not rising and could possibly be falling, suggesting an underlying balance of demand and potential supply that is in pretty good shape. Total inflation is high, but unless the futures markets are wrong again, total inflation should come down to core, and core is telling us that the balance is about right. I didn't hear anything yesterday in the forecast or in the anecdotes—some were strong and some were weak—to contradict this picture or to suggest that we have any need to adjust policy. So I strongly support alternative B.

Markets now roughly agree with our outlook, at least in terms of their expectations for the federal funds rate and judging from our submissions on the forecast process. I don't think we should be trying to change those expectations. I share everyone's concerns around the table about the risks on inflation. Even if I don't always

share everyone's goal for where we might be going in the next few years, I think the risks are clearly pointed to the upside given the tightness of domestic and foreign markets and the increase in headline inflation, which could feed through to inflation expectations.

I like the alternative B language as it was handed out by Vincent yesterday. It is consistent with yesterday's discussion that focuses on the forecast of inflation in sections 3 and 4. It reflects our unease about whether recent improvements will be sustained. I think it should leave expectations approximately where they were, although I don't have any confidence whatsoever in that judgment—I have been wrong too often for too many years on these things. I do think it has the virtue of reflecting our discussion yesterday. I have one suggestion for sentence 3 in section 3, which I think makes it a little closer to last time in terms of wording. In the second sentence—"however, a sustained moderation in inflation"—well, is that core or total? What is that about? I think we should go back to "inflation pressures": "However, a sustained moderation in inflation pressures has yet to be convincingly demonstrated." That is what we talked about last time—inflation pressures. Then, "moreover, the high level of resource utilization has the potential to sustain those pressures." I don't think we need the word "inflation" twice. So with that small amendment, I think alternative B language should do the trick. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, I agree with Governor Kohn. I am in favor of alternative B, of holding the rate where it is. The point that he just made may cover a suggestion I had because I was thinking about what I heard yesterday at the table. I heard two things. One, in our discussion of inflation, I heard some concern about core inflation

qua core inflation. I was going to suggest that the first sentence be modified slightly to say that “readings on core inflation have improved modestly in recent months, but measures of overall inflation have remained stubbornly high.” Then, I would strike “however” and just say “a sustained moderation in inflation pressures has yet to be convincingly demonstrated.” I believe that is what I heard yesterday. The other music to my ears, but I think it also reflects reality—and I hear it more at the table—would be amending slightly the last sentence in that section 3 to read, “Moreover, the high level of global and domestic resource utilization has the potential to sustain inflation pressures.” [Laughter] That is what we said. That is what we discussed. We acknowledge that. I think it would show that we’re tuned in to what’s going on, and that would be my recommendation. Otherwise, I would leave the rest of alternative B unchanged. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Before I talk about policy, let me just note that it has been a tremendous pleasure being a colleague of President Minehan over the years and being an immediate neighbor of hers—[laughter]—at Federal Open Market Committee meetings. For one thing, she has done a great job as buffer between me and the President of the New York Bank. [Laughter]

MS. MINEHAN. Not always easy, I might add. [Laughter]

MR. LACKER. For another, I have gotten an up-close view of some really dazzling jewelry. [Laughter]

MS. MINEHAN. Please take that out of the transcript. [Laughter]

MR. LACKER. Core inflation has come down recently. But as I mentioned earlier, my sense is that it could well rise again. In any event, it doesn't seem likely to fall much further. So I think we have to position ourselves to do something about inflation when we are more certain that the soft patch is behind us. I support the actions in alternative B. I support Vince Reinhart's language from yesterday. I am sure there will be more amendments put on the table. I don't want to start now by commenting on everything that has been put on the table. I will just say that, as we recognized at our last meeting, if inflation fell, we would have a problem characterizing inflation, and core PCE inflation has indeed fallen and could well go below that number on Friday, according to the staff. So it seems appropriate to recognize that improvement.

The difficulty, of course, is how to do so in a way that respects the fact that we haven't yet decided whether our objective for inflation is 1½ or 2 percent. This is what motivated my letter to the Committee last week. I didn't think the first draft of alternative B was sufficiently agnostic on the question. My advisers and I put our heads together, and we couldn't figure out a way to rewrite the statement to acknowledge the decline but not tip our hand toward preferring one objective or another. So that is why in my letter I proposed that we go ahead and make a decision by choosing between language consistent with 1½ and language consistent with 2. After all, we are widely seen to want an inflation rate between 1 and 2, and we communicated that via language in our statement expressing displeasure with inflation below 1 and, more recently, expressing displeasure with inflation above 2.

Sure enough, however, some people with far more expertise in the mysterious art of drafting FOMC statements seem to have found a way around this, and the revised

statement seems to finesse this pretty well—the language “moderation in inflation has yet to be convincingly demonstrated.” In other words, we don’t have to say how we feel about 2 percent inflation because we are not really sure that inflation is 2 percent yet. Now, I think this will finesse the problem for the time being. Assuming that it does finesse the issue—and that is sort of a big “if”—I don’t think we are likely to be able to finesse this issue forever. If core inflation does spend some time near 2 percent, as the Greenbook forecasts, then eventually it will become convincingly demonstrated that inflation is indeed 2 percent. More broadly, the lack of a decision about our objective will continue to pose difficulties both for our statement and our deliberations, and I think it is going to be increasingly unsatisfactory to say we are still thinking about it. So I hope we can make progress on that soon. Thank you.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Mr. Chairman, I am very comfortable with our current stance at 5¼ percent. I think that it is, as I have said before, modestly restrictive and that it will take us over time to a lower inflation rate.

On the statement itself, I have a couple of comments. I am a little uncomfortable with the language used in the output rationale because we use the term “moderate” to describe growth for the first half of this year and coming quarters and this suggests that there will not be much change in growth going forward as we use “moderate” in both places. So I would like, if we could, to have something in there that will describe the pickup in activity from the second quarter on that we have talked about. This would improve the characterization. That is just a suggestion. I know how hard it is to craft these things, but it is something to think about.

On the inflation rationale, I'll make two points. One, I think the statement carries pretty well—that is, inflation has come down recently, but we are not yet confident that progress will be maintained. Two, on a twelve-month basis, core inflation is higher than I find acceptable over the longer term, and would like to see further progress toward price stability. Perhaps President Fisher's suggestions would take us closer to my preference in terms of something more explicit that promotes further progress in reducing inflation. That would improve the statement. But, as I said, crafting these things is pretty difficult. I can live with the language as it is, and those are just suggestions to think about as we go forward from here. Thank you.

CHAIRMAN BERNANKE. Thank you. President Stern.

MR. STERN. Thank you, Mr. Chairman. Well, like others, I think the case for alternative B is convincing. I don't think we have any reason to contemplate changing the fed funds rate target at this point or trying to change market expectations about what we are up to. As far as the language is concerned, something that came up at the last meeting was not to make any more changes than are necessary. Some changes clearly are appropriate here because of the incoming data and the way they have influenced the outlook. With that as a guiding principle, I think alternative B as drafted is fine. I might have a mild preference for the suggestion that Governor Kohn made. I think that on the margin it is an improvement, but I can live with B as drafted. I think we are into nuances here that probably matter more to us than to anyone else. [Laughter]

CHAIRMAN BERNANKE. I am not so sure about that. [Laughter] Thank you. President Poole.

MR. POOLE. Thank you, Mr. Chairman. I support alternative B, and I also support the slight revision in the wording that Governor Kohn recommended. One thing that I worry about and that I hope we can make clear in the minutes—clearly, we couldn't do it in the statement—is that we have been in an unusual period. If you look at Greenbook Part 1, the evolution of the staff forecast, the staff forecast for both '07 and '08 has changed remarkably little since last September. There has been a 0.1, 0.2, or 0.3 here, but very, very little change. Ordinarily over this span of time you get some information that changes your outlook in some significant way. I would hate to see us encourage the market to think that our projected path of 5¼ percent for the fed funds rate is carved in stone. We need the market to respond to incoming data, as we will have to do when we have some data that really move us off dead center. So I hope that we would emphasize—and it has sort of drifted into insignificance here—that “future policy adjustments will depend on the evolution of the outlook.” I think it is very important that the market understands that. It gets into the broader discussion of communications, but I hope the minutes will emphasize the importance of that part of our statement. Thank you.

CHAIRMAN BERNANKE. Thank you. We have seen some change in policy expectations, obviously, in the intermeeting period. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. I am very comfortable with the policy stance—keeping the rate at 5¼ percent. I think policy is in the right place. It is moderately restrictive but not restrictive enough to cause us any problems, particularly in the housing area.

In terms of the statement itself, I am comfortable with alternative B, as written or as modified by Don Kohn. We could talk a bit more about where that word “pressure” should be when you compare it with the last statement that we had, but that is a very minor point. The key in this statement is dealing with the fact that core inflation, according to our forecast, is going to be 1.4 percent in the second quarter. It was 2.4 in the first quarter, 1.4 in the second, and then it goes back up to 2.2 and 2.2. That is really the key because, when you see inflation improving and then going back up again and juxtapose that against the longer-term forecast that we have come up with, which shows some improvement in inflation over time in ’08 and ’09, it is a delicate balance as to how we present this in the statement. I think the way alternative B has been formulated captures that. I had suggested a slightly different approach. I don’t feel strongly about this, but you could also take that first sentence in section 3, which says “readings on core inflation have improved modestly in recent months” and just add the phrase “but part of the improvement may be transitory.” But as I said, I am comfortable with either formulation here. I think it accomplishes the same objective.

MR. POOLE. The minutes should certainly make that point because the staff has emphasized that this may be transitory.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. As people said before, I, too, am in favor of keeping the fed funds rate at 5¼ percent. The economy does seem to be rebounding in the second quarter. The lingering uncertainty over housing suggests that now is not the right time to take more-aggressive action. I am in agreement with that. However, the most current readings on core inflation, while they have been good—just to

reiterate the point—I, too, believe there is a lot of evidence that it may be transitory, and we have to be very careful about the fact that headline inflation has not been very cooperative recently. Inflation expectations remain somewhat high from my perspective, and based on our previous discussions, that is a worry for me. I do tend to favor our announcing an inflation target. I am not yet convinced that we will see inflation expectations where they need to be to achieve my goal by the end of 2009.

If we look at the projection narratives prepared by the Committee members, we see that a majority believe that the flat fed funds rate will get us to a PCE core inflation of 2 percent or slightly less by 2009. If my own goal were 2 percent, I might be more comfortable with a flat fed funds rate going forward. In fact, even the Greenbook suggests that there is a model where that could happen. The bottom line is that I think we can't avoid the elephant in the room. How can we sensibly talk about the forecast and appropriate policy choices, either in real time, as we do today, or prospectively, when we can't articulate or agree upon what our objective is? In the absence of agreeing on a numerical long-run inflation objective, we, as individual members, face increasingly difficult choices in arriving at an appropriate policy stance in any given meeting and even greater difficulty conveying our Committee's decision to the public in an informative and transparent manner.

Individuals could be advocating different policy paths either because they have different models of the economy or different inflation goals or both. At a minimum, I believe it would help our internal deliberations—and it would certainly help mine—if the causes of these differences in our projections were more transparent. If we are thinking about our forecast as a communication device, this would seem to even be more

imperative. That brings me to language. I think the language in the revised alternative B is incredibly well crafted and it tries to get around the problem that we are facing in dealing with what we meant by “elevated” and how we think about this going forward. Citing growth over the past two quarters as having been moderate is a step in the right direction because it encourages the public and the markets to look through shorter-run, transitory movements. Similarly, we need to be looking through transitory movements in inflation as well. As several of you have pointed out in your comments on the proposed statement language before the meeting and as Vince pointed out in our last FOMC meeting, how we characterize the inflation outlook in our statements going forward is becoming increasingly an issue since we have not agreed on what our objective is.

I have two related concerns. The first is that, in eliminating “elevated,” we run the risk of signaling to the market that we are satisfied with the current rate of inflation, even though we haven’t communicated what that means. Are we looking forward twelve months? Two years? Three years? Are we looking backward at the past three months or the past twelve months? Are we basing our judgment on forecasts of the next twelve months? Are we concerned only about the core PCE, or are we concerned about headline PCE or some version of the CPI that is relevant to our concept of inflation? As I said yesterday, my concern is that there is considerable confusion in the marketplace about why we focus on core and what it means to us and how we communicate that. Internally, we are not clear on these issues, so how do we expect the public to divine our meaning when we are not willing to do it internally? In essence, I think there will be a great deal of speculation, even with this language, about what we mean. Will the market conclude

what we think it should, or will we just accept whatever the market divines our intentions to be?

My second concern about changing the language dramatically is that it might convey to the market the notion that we are satisfied with inflation at current levels. We may reveal through our projections next month that we actually are forecasting inflation to be lower than it is today on a twelve-month basis. This was the point that President Yellen made in her memo. It creates somewhat of a contradiction in how we describe our current views. If the market infers that we are satisfied with a year-over-year core at 2 percent and then our forecasts come in at 1.8 or whatever, I think that will send some confusing messages. On the other hand, releasing the forecast later may clarify for the market what we are expecting and that may be the interpretation. But there is no way for us to know what the outcome of that is without being more specific about what our objectives are. Why do we want to create that much confusion and speculation in the marketplace about what we mean? I understand the desire to extricate ourselves from the language about core inflation, but I think we are being unnecessarily confusing and cryptic in our choice of language, and it will be difficult for us to control those expectations given the way we are trying to manage the language.

I am not going to get engaged in all the details of the wording. There must be people who are better at that than I am. But I would just like to conclude by noting that, even if we are successful—and, indeed, we may be with the current language in alternative B—in wordsmithing ourselves around this delicate problem, it is not going to go away. We will continue to grapple with it in this environment—and we are going to continue to be pushed by the markets, by commentators, to clarify what in fact we mean.

So the problem isn't going to go away even if we sort of finesse our way around it in the short run. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. I also support the policy action in alternative B. I have some of the same concerns that President Lacker and President Plosser, and also President Yellen in her letter, raised about the increasing difficulty in characterizing inflation without having a clear sense of the Committee's longer-term objective on inflation. I also mentioned yesterday that I have some concerns about claiming that inflation has moderated at the same time that we see the headline measure rising. I find this to be a real problem, and I therefore like the suggestion that President Fisher made. However, I am concerned about introducing yet another concept or another measure of inflation in our statement. I hope that through the minutes we will be able to raise our concern about the headline measure staying stubbornly high. But without further communication, introducing yet another concept, or another measure of inflation, in our statement is going to confuse markets. So I support making as little change as we can to the statement, and I am comfortable with the way the most recent alternative B is presented—although I can also support Governor Kohn's suggestion about the word "pressure." So I support alternative B, with some of the minor changes that Governor Kohn has made. Thank you.

CHAIRMAN BERNANKE. Thank you. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. I, too, am in favor of keeping policy where it is. As I stated yesterday, I see the risks around growth as better balanced than they were, even given the potential for the housing problems to be deeper and

longer-lasting than we might have expected earlier in the year. I remain concerned about the risks that inflation will not continue to moderate, but I am not wed, as I have said many times, to a particular low number. I would be as happy at 2 as at 1½ and perhaps even happier given that levels that start with 1 seem to have downside risks—or at least they did the last time we were there.

I am concerned, however, about the pressures on the economy, whether you think of them in terms of headline inflation or in terms of the components of headline, particularly energy costs, tight labor markets, and a growing world. I think, although we may not want to put it in the statement, that Richard is right—our economy is subject to pressures from the rest of the world at this point and, related to that, the falling dollar. A lot of things could take inflation from its current moderate level and push it back up, and that I would be very concerned about. It is true that financial conditions have tightened slightly, so markets are starting to do a little work for us. But I believe that we need to continue with policy in a slightly restrictive stance to provide some insurance that the inflation pressures in the economy stay moderate. Staying with current policy is a good balance between the prospects we see for moderate growth and the prospects we also have recognized around the table for the potential for inflation pressures to get worse.

I support alternative B's language. I want to say two things. First, the more substantive concern—I think that Governor Kohn's thoughts about inflation pressures are slightly better than the current language. I was attracted to the "transitory" language that I think President Moskow raised first, and we fiddled around with it a bit in Boston, but I have been convinced that "convincingly demonstrated" and "transitory" are equivalent. [Laughter] So I don't want to battle about that at this table. The statement in section 3 is

headed in the right direction, and I would be in favor of its current form or the form that Governor Kohn suggested. Second, I may be the only one sensitive to this, but in section 2 we have two sentences that start with exactly the same words. I never wrote that way when I was in school. [Laughter] There is an easy way to make that sentence a little better from an English composition point of view. But, again, that is tricky to argue about at the table, so I guess I am fine.

CHAIRMAN BERNANKE. How about something like “Economic growth proceeded at a moderate pace”?

MS. MINEHAN. There are many ways to do it. I know that there are some objections to this, but you could say, “Despite the ongoing adjustment in the housing sector, the economy appears to have grown at a moderate pace over the first half of this year and seems likely to continue growing moderately over the coming quarters.” You could make it one sentence—it is simple, it is shorter, and it reads better.

VICE CHAIRMAN GEITHNER. We are talking about the economy, so mentioning it twice seems to be reasonable. [Laughter]

MS. MINEHAN. We have two sentences starting exactly the same way, though. In any event, this is a nit in the overall scheme of things.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I, too, favor alternative B and the current policy stance. My interpretation of the discussion around the table yesterday is that we see encouraging signs that the current policy appears to be producing the desired directional effects at least, or intermediate effects, so it seems to be working. There is

still a fair degree of uncertainty, and based upon my long experience, I think it is a normal amount of uncertainty. So the current policy deserves being held.

Regarding the policy statement, I favor the wording in revised alternative B that was distributed by Vince yesterday afternoon because I think it captures the key points—the ones that are important to me at least—and they are moderate growth prospects, mention of the housing sector, better inflation readings and prospects of continued moderation (though it is still too early to draw definitive conclusions), continued inflation pressures, and a continued weighting to inflation risks with no suggestion that the current levels around 2 percent are acceptable for the long term. So for that set of reasons, I favor the wording as presented.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I certainly agree that policy is well positioned, and we should leave it exactly where it is. Markets have come around to our view, and I think our objective in the statement should be to keep market expectations aligned with our view and not to change them.

In terms of the statement, I think that the current draft is very much improved relative to the Bluebook, and I have no problem in supporting the current language. I like Governor Kohn's proposal; I think that it is a worthwhile change. I do, however, share many of President Plosser's concerns and think that we will have a lot of difficulty going forward. Markets are wondering what our long-run inflation objective is. They will certainly note the omission of the term "somewhat elevated." It will raise a question about whether, if core inflation were to stabilize at 2 percent, we would be satisfied with that or we would want to see it move lower. This statement is very cleverly crafted, and I

think it succeeds in finessing that issue for today. I don't have a problem, really, with finessing it for today.

My own proposal was designed to say to markets something that I thought we could say without actually coming to full agreement, even within the Committee, about whether we have a single long-run inflation objective. Even if we don't go announce a numerical inflation objective, our statements need to be consistent with the projections that we will be issuing publicly. President Plosser pointed out that we will be issuing a two-year projection that does show inflation coming down. It seemed to me that we could therefore remove the term "elevated" and still say, as our projections in a couple weeks will confirm, that the Committee expects underlying inflation to come down further without saying exactly how far. But I don't feel strongly about such language, and I think alternative B does a good job of resolving the problem for today. We will wait until another day, when we will have to face this again.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Like many of you, I see no reason to materially change market expectations about our policy action. It is important that we not appear more comfortable with either the level or the trend of inflation than we actually are. Any nods in that direction in the statement are ripe to be misinterpreted, and the process of fixing any such nod would be tricky. Yesterday Vice Chairman Geithner said that financial markets are in a delicate place, and I would say that is particularly relevant in the context of this statement. So I would try not to mess with market expectations, given what we know about the state of our financial markets. All that having been said, I support alternative B. I like Governor Kohn's amendment, and I still

think we are running a bit of a risk in suggesting to the markets that we are more comfortable. But I don't think there is really much we can do at this point to mitigate that risk more than the Kohn amendment suggests. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thank you very much. As I mentioned yesterday, I think we have seen some very welcome signs of moderation, but it is certainly too early to declare a victory. That is certainly very clear in the Greenbook, as many of you emphasized. I also agree with Governor Kohn that we are in a reasonably good spot with moderate growth likely going forward and inflation and inflation expectations reasonably contained. It is reasonable to think that they may be going down, but there's a lot of uncertainty, and most of the uncertainty is to the upside. It is sensible to acknowledge reality, and we should take out the word "elevated" so that we are not seen as inflation nutters. We should acknowledge that some of the numbers have come down but be careful about saying that we are done, we are happy, or we are satisfied.

As I mentioned yesterday, an upturn in owners' equivalent rent could be coming. There could be some uncertainty about pass-through to core of the higher energy prices that we have been seeing. There is continued strong world demand, and there could be some lagged pass-through effects of the previous declines in the dollar. I see all those as risks to the upside, and so I think it's important to convey that we are still concerned about those things. That said, I am very supportive of where we are with alternative B, in terms of both the policy and the message that is coming from it.

The type of amendment that Governor Kohn mentioned is one that I very much support for a number of reasons. One, as he mentioned, it is more forward looking. I

think it is much better to talk about a sustained moderation in inflation pressures rather than inflation, because that gets us out of explaining specifically what we mean by “inflation.” It’s a little bit more general. If we had a clear goal, it would be beneficial. Given that we don’t have a clear goal, I think talking about pressures is good. It also has the value of being forward looking. Two, the amendment fits with President Stern’s notion that we should try to keep as much in parallel with the previous statement. So mentioning moderation in inflation pressures—I’m not sure I wrote down properly whether Governor Kohn suggested in the final sentence of section 3 “the potential to sustain those pressures,” taking it back parallel to what we had before, or whether he said “sustain inflation.” So I would certainly agree with “those pressures.” Three, putting in “pressures” gets us out of the potential for getting stuck. Here we are saying “sustained moderation in inflation has yet to be convincingly demonstrated.” Well, if we take that out at some point, then we will be admitting that it has been convincingly demonstrated, or at least markets might interpret us as saying that. I think that gets us into a bit more of a box than I would like, and so talking about inflation pressures avoids the market’s taking an implication that if we remove that at some point we have said, “Okay. It is convincingly demonstrated when for six months it is below X or below Y.” I think since we haven’t articulated a goal yet, we don’t want to get into that box, but I do think that would be one of the values of articulating a goal. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. Thank you. I support alternative B with the amendment that Governor Kohn suggested, so I am very comfortable with that. The real issue for me here is one that I think has been expressed by several others, what President Plosser called the

“elephant in the room,” which is that writing the statement is getting harder and harder. I think that we have a brilliant fudge this time around, but it is not going to work forever.

There are two senses in which I have a problem with this statement. One is the issue of the appropriate level of inflation that we should be shooting for. This is really two separate questions. One is what we do about communication outside, but there is also an issue about consensus inside the Committee. I would find it much easier to agree to statements of certain types if, in fact, there were a consensus. As many of you know, I am actually comfortable with an inflation number of 2 percent. On the other hand, if the Committee comes to consensus for a lower number, I would be more than happy to be comfortable with that. In fact, I would be willing to have a statement that would reflect a lower number. I sense that this is true for other members of the Committee—some who might be caught on the dovish side with 2 percent while some members are on the hawkish side at 1½. But the difference between the hawks and the doves here is extremely slight. In fact, from more than five feet away, you couldn't tell the difference between a hawk and a dove. [Laughter] That's one issue that is very important. I think it is going to become more and more difficult as we go forward, as long as inflation evolves in the way that we expect. I mean, we could have bad news—inflation could actually start rising—and we'd have a different kind of a problem. But let's hope we don't get into that problem. We want dealing with the good news to be the problem.

The second issue relates to core versus total. I am quite concerned about the emphasis on core, not because I don't think it is very important to communicate about core, particularly when you get a big shift in something like energy prices and you don't want to unhinge inflation expectations. In that context, we need to talk about core so that

people understand that the currently high inflation rates, in terms of things they care about—going to the gas station or going to the supermarket—are not actually something that should change their long-run inflation expectations. That's why the use of the core measure makes a lot of sense. The problem is, as I read the research, that no one measure of core will always be good. In fact, the core measure that we have evolved to has a lot of history behind it, but it is not clear that it will be the best measure in all cases. There are certain alternatives that I think will work in some cases—a trimmed mean may sometimes be appropriate, but at other times it will not. So I think there will be a key problem, as has been discussed today, which is that at times one core measure may make more sense than another core measure. Our whole discussion is very much in terms of a particular core measure that excludes food and energy. That measure will sometimes be problematic for telling us about long-run trends, particularly if we think that energy changes are more permanent or crazy policies about ethanol may be having a more permanent effect in terms of food prices. In this context, we are going to have to deal with exactly this issue going forward. Also, a problem is that people do consume a lot of food and energy, and it is very peculiar to act as though we don't care about that.

So I think that we have to grapple with these issues. They are part of our communication issues. The bottom line is that we are fooling ourselves if we think that we are going to get away forever with not dealing with them. We will have to figure out some way of doing this. I think that we can do it because, in my reading of what people on the Committee have been saying, the differences here are actually fairly minor. It is the outside world that wants to make them into a big deal because doing so sells newspapers. But we do need to get to some consensus on these issues so that the outside

world sees that the Committee actually has unity rather than differences. Thank you very much.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin and others have referred to communication issues. I'd just point out that we will be addressing some of those later this morning. Vice Chairman Geithner.

VICE CHAIRMAN GEITHNER. I actually agree with—and am happy associating myself with—much of what has been said. I am totally comfortable with alternative B as amended by Don or with the Kohn-Kroszner amendment because you don't need to repeat “inflation” twice in the end, [laughter] and I think we should keep the rate as it is.

MR. KROSZNER. Tim, I'm sorry, I heard my name but I didn't hear what you said about me. [Laughter]

CHAIRMAN BERNANKE. Change the word “inflation” to “those.”

VICE CHAIRMAN GEITHNER. Several of you put on the table a bunch of broader questions about communication going forward, which I would like to talk about now, but I think we should defer that until we come to the later conversation. So I am fine with alternative B as amended.

I do think that a lot of you made many interesting suggestions about the language. But there is much virtue in making minimal changes at the meeting because, even if they sound small, I think it is hard in the few minutes we have before we vote to really step back, take stock, and ask whether we altered the balance in ways that we fully intended to be understood. Thus I would be for minimalism in changes at the table generally unless we have something really consequential that we are trying to shift in the statement. In

that spirit, I would keep the changes small and stay with a modest amendment to alternative B.

CHAIRMAN BERNANKE. Thank you. Well, we appear to be in considerable agreement about the policy action. [Laughter] It is a good thing, I guess. Not only are we in agreement, but also the bond market is in agreement. [Laughter] I would just note that, in fact, the bond market is acting as an automatic stabilizer, responding to news, as we have discussed before. I think we are in a very good place, and our forecasting process has served us very well. In that respect, I think this might be an appropriate time to congratulate the staff, including Dave Stockton, Karen Johnson, Vincent Reinhart, and the research directors at the Reserve Banks who are here, for their tremendous contributions to this process, which has really been instrumental in helping us find the right level of policy and in building a lot of credibility in the market. So thank you very much for your outstanding work.

With respect to the statement also, I didn't hear a lot of dissent. First of all, let me say that I think Governor Kohn's amendments in section 3 are very much to the point—so that would be “a sustained moderation in inflation pressures.” First, the word “pressures” dilutes to some extent the attention to the monthly numbers. Second, as a number of people have said, it is a broader concept, and it can be construed as including some of the headline issues and the oil, commodities, and so on prices that we are concerned about. So I think it is definitely an improvement, and so I would like to recommend it.

On section 2, just a couple things. One is that I would hesitate to try to indicate growing strength in the second half, for a couple of reasons. First, at least in terms of the

Greenbook, that acceleration is relatively modest—certainly not at all a definite uptick. By continuing to use the language of “moderate pace,” I think we signal that we are not going to take the second quarter as necessarily indicating a new reacceleration of growth. We think that the second quarter represents, at least partly, a transitory increase in the growth rate. Second, Professor Minehan [laughter] was correct about the quality of writing in the section. The last statement began with the term “economic growth.” I am kind of ambivalent about whether or not to do this, but we could say, “Economic growth appears to have been moderate during the first half of this year, despite the ongoing adjustment in the housing sector.”

MS. MINEHAN. That works.

CHAIRMAN BERNANKE. A little more variation—is that acceptable?

MR. MOSKOW. Could you read that again?

CHAIRMAN BERNANKE. The proposal is, “Economic growth appears to have been moderate,” and then it goes on, as it says here, “during the first half of this year, despite the ongoing adjustment in the housing sector.” I see nodding, so I think that is accepted. I’m sorry. No?

MR. KROSZNER. There is a tense question. The first half of the year isn’t over.

CHAIRMAN BERNANKE. Yes, it is—almost. [Laughter] Well, I mean, that is no different from what we already have.

MR. MISHKIN. It’s the word “appears,” which is fine.

CHAIRMAN BERNANKE. The content is no different.

MR. KROSZNER. Okay.

CHAIRMAN BERNANKE. Is everyone okay with the language?

MS. MINEHAN. Yes. Well, at least that solves the instant problem.

MR. MISHKIN. You do know that English professors get paid very little money.

[Laughter]

MS. MINEHAN. That is what I'm going to—very little money. [Laughter]

CHAIRMAN BERNANKE. I think President Minehan is entitled to her change, given that she is valedictory in this. [Laughter] So with that change—"Economic growth appears to have been moderate during the first half" et cetera—that would be my recommendation. Are there any further comments?

MR. PLOSSER. Mr. Chairman?

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. Just a clarification. On section 3, can somebody just read that complete section as now amended?

CHAIRMAN BERNANKE. The entire statement: "The Federal Open Market Committee decided today to keep its target for the federal funds rate at 5¼ percent. Economic growth appears to have been moderate during the first half of this year, despite the ongoing adjustment in the housing sector. The economy seems likely to continue to expand at a moderate pace over coming quarters. Readings on core inflation have improved modestly in recent months. However, a sustained moderation in inflation pressures has yet to be convincingly demonstrated. Moreover, the high level of resource utilization has the potential to sustain those pressures." The last section is the same.

MR. PLOSSER. This is just one observation. The second sentence of section 3, where we talk about capacity utilization, seems to be redundant once you put "inflation pressures" in the first sentence.

CHAIRMAN BERNANKE. Well, look at the May statement. We have been doing that for a while now. [Laughter] Are there any other questions or comments? If not, I'd like to call for a vote.

MS. SMITH. I will be reading the directive from page 29 of the Bluebook. "The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee in the immediate future seeks conditions in reserve markets consistent with maintaining the federal funds rate at an average of around 5¼ percent."

And the risk assessment: "In these circumstances, the Committee's predominant policy concern remains the risk that inflation will fail to moderate as expected. Future policy adjustments will depend on the evolution of the outlook for both inflation and economic growth, as implied by incoming information."

Chairman Bernanke	Yes
Vice Chairman Geithner	Yes
President Hoenig	Yes
Governor Kohn	Yes
Governor Kroszner	Yes
President Minehan	Yes
Governor Mishkin	Yes
President Moskow	Yes
President Poole	Yes
Governor Warsh	Yes

CHAIRMAN BERNANKE. Thank you. The coffee is not yet brewed.

[Laughter] So why don't we go on to the next phase of the meeting. We turn to Vincent to discuss communication issues.

MR. REINHART.⁵ Thank you, Mr. Chairman, for giving me the normal role as speed bump. In that effort we are now handing out material to which we will be referring. If someone will let me know when the doughnut truck comes, I'll pick up

⁵ Material used by Mr. Reinhart is appended to this transcript (appendix 5).

the pace. [Laughter] The Subcommittee on Communications began its work only fifteen months ago, [laughter] which seems like yesterday (at least in geological time). Given the considerable discussion the Committee has had since then on its communication policies, it seemed appropriate to take stock. In particular, I sent around a list of questions designed to elicit your views on the potential roles of the survey of economic projections, the minutes, and the statement in refining your dialogue with the public. The material with the cover, "FOMC Communications," is designed to help to organize this discussion.

With regard to the enhanced economic projections process, the survey results circulated on June 15 reported general support for the key features of the process, with three notable exceptions, given at the top of exhibit 1. The subcommittee tried to address those concerns in the modified projections process used for this meeting. So the first question listed at the top of your first exhibit boils down to, how did they do? Did the changes address the concerns you expressed in answer to the May survey? In particular, some of you preferred not to share your forecast submissions, mostly on the grounds that it might make the discussion of the economic outlook at the meeting more inflexible. But some of you held that sharing was important, both to help inform your internal deliberations and as a source of material for the forecast write-up. As a compromise, the submissions were circulated on an anonymous basis, with an opt-out clause that one of you took this time. Some of you were concerned about specificity—particularly in writing down an explicit path for the federal funds rate and in quantifying uncertainty. Those questions were turned into qualitative ones that asked for comparisons with the staff policy assumption and historical uncertainty.

Another process question is item 2. In what form should the projections be released? Debbie Danker's memo identified the three options listed in the exhibit, which basically differ by the extent to which the narrative description is tailored to suit different purposes. Option 1 is one-size-fits-all: The staff would produce a single document describing your economic projections, which would be dropped into the Committee-approved minutes and repeated verbatim in the Board-approved Monetary Policy Report. The chief advantages of this option are that the vetting process is tried and true and that there will be consistency across Federal Reserve documents. The disadvantage is familiar to anyone who has bought clothes off the rack in a big box retailer—the fit will not be perfect across documents. Option 2 opens the door to some variety. The Committee-approved minutes would include a brief description of the forecasts, as is the practice now. A separate document would give a fuller account of the projections. In that case, there would be more flexibility as to who approves the document and when it is released. This poses a tradeoff that has come up in previous discussions in that the earlier the narrative is released, the more useful it will be in explaining the policy decision but the more complicated the governance process will be. Option 3 is the bespoke alternative in which separate, complete discussions would be prepared for the minutes and the Monetary Policy Report. The fit will be better, but carrying it out will be more expensive, and even subtle differences may draw attention.

The third question asks when the projections should be finalized. The choices essentially are the day of the meeting, the end of the week of the meeting, or as late as practicable to be close to the official release of the document. But you have a more fundamental question to answer first. What is the purpose of the economic projections? If they are supposed to help explain your most recent policy choice, they should be conditioned on the same information set that the policy decision is. That is, they should be finalized as soon as possible after the meeting so that they are not contaminated by post-decision information. That is the rule we now use for the minutes. If, in contrast, the Committee's objective is to release an up-to-date assessment that sheds light on future policy actions, then the individual projections should be nailed down only close to publication day. The middle ground of closing the books on the projections a few days after the meeting seems unsustainable to me, particularly if the narrative description is to be included in the minutes. The first time an important piece of news hits within the window between policy decision and update deadline, the explanation of the policy action will become muddled. Some immediate feedback on that score will be helpful because the schedule for this round allows for your projections to be updated through close of the week. If so, you would seem to have to incorporate Friday's chockfull data calendar. Do you really want to do that, particularly as it may lead to confusion in the minutes about what you knew and when you knew it?

The next exhibit focuses on the minutes. You have 2½ years of experience under your belt in publishing the minutes three weeks after the day of the policy decision. In that time, the document has received more attention from you in the editing process and from market participants and the press on its release compared with the previous regime of delaying publication until after the next meeting. How do you assess the benefits and costs of further expediting the minutes? The benefits, listed at the left, are the same as discussed in 2004. A document made public closer to the day of the decision will be more of an aid to the private sector in understanding the current outlook and the prospects for policy. In that regard, you will be able to use that material from the minutes for public statements more promptly. A speedier release may facilitate making the post-meeting statement shorter or less substantive. I point out, though, that my sense in 2004 was that a few of you supported expediting the minutes in the hope that the statement would subsequently be shortened, but that did not pan out. To appreciate the costs listed at the right, you should understand that we use the three weeks after the meeting partly to accommodate your busy schedules and partly to provide a cushion so that the drafting iterations can converge without a dissenting vote. The costs, then, would include your increased effort to ensure that your schedules align with that of the drafting and approval process for the minutes. You should also recognize that less drafting time might lead to more compromises that make the minutes less informative so as to avoid dissent, and more staff resources will be needed to prevent errors. Simply put, with fewer hours, we need more eyes looking at the document.

Of course, the decision on expediting the minutes further may interact with other potential decisions on communication policies, especially those regarding the

enhanced projections process. In particular, if you decide to include a narrative description of your forecasts in the minutes, you may want to delay any speeding-up of the minutes until you are comfortable with the new process. You may also want to consider ways to make drafting and commenting easier. That is the subtext underlying question 5. How do you assess the current content of the minutes, including the staff's description of recent data? Some time ago, it was suggested that the first eight to ten pages, which provide a backward-looking review of recent economic data, be relegated to an annex. In a similar vein, it could be described explicitly as a staff summary—with its production perhaps even linked up mechanically to a modified Part 2 of the Greenbook. That way, you would be responsible for commenting only on the forward-looking and policy portions of the document, and some of the pressures on staff time could be relieved. If you have any other views on the content of the minutes, today probably would be an appropriate time to raise them.

The last exhibit raises issues that have not been addressed for some time, namely the role of the post-meeting statement. Some of you might consider the statement as a vehicle designed only to convey coarse signals about policy, with more-nuanced information provided in subsequent communications. Others might see it as important that the statement be able to stand on its own as a reasonably complete explanation of the Committee's monetary policy decisions and intentions. What is the appropriate role of the statement in light of the changes to the Committee's other communication devices (question 6)? The statement's role, which can be described in terms of a monetary policy rule, has varied over the years. At times the statement has provided hints about the odds on future action by characterizing the left-hand side of the policy rule—that is, by directly addressing the path of the federal funds rate. At times the statement has described the right-hand side of the policy rule—that is, the risks to the dual macroeconomic objectives. That is another way of stating question 7: If you believe that the statement should provide guidance about the outlook, should that guidance be couched in terms of the policy interest rate or the dual objectives? If you decide to describe the economic outlook, you will have to settle on the policy assumption underlying that projection, as in question 8. The conditioning possibilities include the appropriate path of monetary policy, some reading on market expectations, or an unchanged policy rate. This choice may interact with the role you envisage for your economic projections in explaining policy decisions.

As for question 9, your ambition regarding the complexity of the statement will determine how much time needs to be devoted to drafting. Because of constraints as to how long you can meet as a group, a complicated statement necessitates pre-meeting consultation. That may get the nuance right, but it may also force you to settle on a policy view before you have had the benefit of consulting with your colleagues on the Committee. Moreover, it shifts some of the policy discussion out of this room, for which a transcript is kept and minutes are produced, and into informal back channels. A statement that could be agreed upon mostly within the confines of

these four walls is probably one that is short and relays a routinized risk assessment, given your long-held view that “nineteen people cannot edit the statement on the fly.”

Question 10 raises one last governance issue: Who owns the statement? At the inaugural of the age of statements in 1994, the Committee formally directed the Chairman to explain its policy action. Over the years, the statement has come to be viewed as a Committee product, with the words sometimes viewed to be at least as important as the immediate policy action. But you still vote only on the policy action and the risk assessment. Should that continue, or should you be asked to vote on the statement in its entirety?

These three sets of questions are interrelated, and there is no obvious place to wade into this thicket. One possibility would be to conduct two go-rounds on these issues, with the first covering your views on the enhanced forecast and the minutes and the second addressing the statement. The first two issues are closely related and perhaps closer to closure. I suspect that you are closer to the beginning of your discussion of the statement than to the end. That concludes my prepared remarks.

CHAIRMAN BERNANKE. Thank you. Are there any questions? Vice Chairman.

VICE CHAIRMAN GEITHNER. Vince, it's a little unclear from what you've circulated what the subcommittee is recommending or presuming about the pieces of material that would go into the Monetary Policy Report. Do you want to say just a little about options there? I assume you want people to comment on that question, too, and that goes to the core of this next stage of evolution in the transparency.

MR. REINHART. That's a complicated governance issue because it relates to both what the Committee approves potentially and what the Board approves because the Monetary Policy Report is by law a report of the Board of Governors explaining the monetary policy actions of the Committee. The short answer is that it depends on what you want. One possibility—that's option one—is to write a narrative included in the minutes, have it approved by the Committee, and then essentially lift that out and make that a significant chunk of Part 1 of the semiannual Monetary Policy Report. Then the words would be the same in both places.

VICE CHAIRMAN GEITHNER. Those choices I think I understand, but I was really thinking about the pictures. You circulated a whole different set of new things, innovative pictures that showed dispersion, uncertainty, balance of risk, histograms, and so forth. I guess you don't need to answer this question, but do you want people to react, in the first round at least, with a view on which pictures we think should be part of the narrative?

MR. REINHART. If you don't express a view here, you'll have a chance in commenting on what the staff proposes. Our intention was to take a small subset of those charts and tables that were essential for explaining the central tendency projections themselves and the dispersion of views and to put them into the narrative. The draft that we would circulate to you would have that information, and from there, we could take your comments.

VICE CHAIRMAN GEITHNER. How small a subset?

MR. REINHART. About the same size as the last draft we circulated, which was, in fact, circulated as an appendix in Debbie Danker's memo.

VICE CHAIRMAN GEITHNER. I didn't mean that. I'm sorry. I meant the graph showing the evolution of the central tendency with things plus the histograms? That's what I meant by subset.

MR. REINHART. Yes.

MR. FISHER. Excuse me, but the histograms we're talking about are the individual differences?

MR. REINHART. Yes. Well, that's what we circulated last time in the draft write-up of the May discussion.

MR. FISHER. So you would have the central tendency analysis that we have and then further amplification, which would show individual differences of the nineteen members of the Committee.

MR. REINHART. Potentially that's what we would have.

MR. FISHER. I'm just trying to understand what we're going to talk about.

MR. REINHART. The staff draft of the June narrative will be similar in structure to the May narrative. That, however, is only the first draft. Given that we intended it to be similar in structure to the May narrative, then we would include a couple of histograms. We also added in this package a revised picture of the central tendency—you know, the red bars and the box and whiskers chart. We intended to include that. So we didn't view any material upgrade in the pictorial description of the forecast. We tried to come up with as fat a package as we could for your internal discussion so that you could see how the individual forecasts of your colleagues vary and also are related—for instance, between the unemployment rate and the growth rate and between the inflation rate and the unemployment rate.

CHAIRMAN BERNANKE. President Minehan.

MS. MINEHAN. I think Governor Mishkin preceded me.

CHAIRMAN BERNANKE. We're having questions for Vincent now.

MS. MINEHAN. This is just an intervention.

CHAIRMAN BERNANKE. I think I had President Poole first and then Governor Mishkin. President Poole.

MR. POOLE. Vince, in thinking about the possible benefits of accelerating the release of the minutes, can you name a time when that would have produced a benefit? I

understand the cost because we all understand the costs, but I don't know of any case in which releasing the minutes five days earlier would have bought us anything. At any rate, we need to think that through before we bear all those costs.

MR. REINHART. The particular cases that I can imagine would be employment reports. If it takes five fewer business days—and that might be a little speedier than the staff can actually deliver—any cutting of those business days, particularly if it gets past that Friday, produces the chance that there would be another employment report between your policy decision and the release of the minutes. This also interacts with the Chairman's testimony schedule, which is something we have to think about. Do you want to be in the position of having the minutes more likely to be out before his testimony, or would you prefer to have the minutes out after the testimony? I can imagine both benefits and costs associated with that.

MR. POOLE. It probably would be helpful if we could have more detail with regard to how that might work and how often those cases would arise because the costs would occur continuously. As you emphasized, there are also some risks to accelerating the minutes because doing so reduces the amount of time to think it all through and make sure that nothing has slipped through inadvertently.

MR. REINHART. There were a couple of statistics in Debbie's memo in particular about how it interacts with the standard semiannual testimony schedule.

MR. POOLE. Another observation somewhat in the same vein—regarding the economic projections, as I commented earlier, we have been thinking about this during a period in which the forecast hasn't changed much. The situation has been pretty benign from the point of view of anybody who has been doing this for very long. One thing that I

think we need to work on is how this would have worked—would it likely have been constructive—at a time like the fall of 1998, the time of September 11, 2001, or the time in early 2001 when the economy was sinking really rapidly? We need to work on those cases and not just think about the projections in the context of the relatively benign period that we've had. I realize that that involves more staff work, but it seems to me essential that we think all of that through before we start to do it.

One other comment: I view the whole communication process that we've been going through as incremental, and I'm a little worried that we're biting off too much at once here. We should think about a really pared down set of releases here if we're going to expand the process with the idea if all that works well, then we'd take the next step.

CHAIRMAN BERNANKE. Let me just say that there's going to be a go-round. Everyone will have an opportunity.

MR. POOLE. Well, I'm sort of asking him to reflect on that. [Laughter]

CHAIRMAN BERNANKE. Governor Mishkin, do you have a question?

MR. MISHKIN. Yes, I do have a question—just a clarification. One thing that we talked about early on when you gave us information was that there is the information regarding our views about whether risk was greater or less than usual and about the skewness of the risk. You might also want to include in the documents that would go out information to guide people on what is normal so that you would have the things that we actually sent out, which was either a picture or the table showing the forecast errors. Is it your view that part of it would be not only the charts that we actually responded to but also the background information?

MR. REINHART. Right. I believe the table of uncertainty was one thing that the subcommittee viewed as useful to include, not the three big fat bars that showed uncertainty variable by variable. That was useful background for writing the paragraphs in the narrative that talked about the Committee's perceptions of risks.

MR. MISHKIN. I'm just trying to remember—did the table have the uncertainty for the variables?

MR. REINHART. The table had historical variability coming from a couple of different sources.

MR. MISHKIN. The Greenbook and FRB/US.

MR. REINHART. Right. That would be a reference table in the write-up. The narrative would say, "In the Committee's view, current uncertainty was about at historical experience." Then in the narrative description of the risks, we'd use the information that you provided about the asymmetries of those risks. I don't think we envisioned showing a particular chart.

MR. MISHKIN. Right, but the key idea is that we do have a table with actually some numbers as part of the document. Thank you very much.

CHAIRMAN BERNANKE. President Minehan. I'm sorry. You had an intervention.

MS. MINEHAN. That's all right. I have one question and a plea. The question is, Have we decided about how many times we're doing these forecasts and I just missed the decision?

MR. REINHART. No.

MS. MINEHAN. Will we be meeting four times a year?

CHAIRMAN BERNANKE. That's what we have to discuss. That's on the table.

MS. MINEHAN. Okay. It didn't seem to fall into this huge list of things. The plea is, Please tell us what you want us to focus on first. There's so much stuff here that goes into the heart of every communication issue that we've talked about over more than the past eighteen months. Do you have in mind a plan of action for which you need us to weigh in on something first and then other things second and third?

MR. KOHN. Our hope was that we could come close to closure on enhanced projections.

MS. MINEHAN. Okay.

MR. KOHN. That led naturally into the minutes because the projection's write-up would be in the minutes. The statement would be put off for a second round, and I personally wouldn't be surprised if we never got to the second round. [Laughter] We could try. I think we should focus first on the projections—what's in them—and then how they might relate to the production of the minutes.

MS. MINEHAN. So really to home in on what we all want to see out of the projections is job number one.

MR. KOHN. Right. We would like to come out of this with some decisions made about the way forward.

MS. MINEHAN. Okay.

CHAIRMAN BERNANKE. President Moskow.

MR. MOSKOW. Is the subcommittee making a recommendation on any of these?

MR. KOHN. No. All along we've viewed our job as bringing things to the table and helping the FOMC to make the decisions and not making recommendations, and we've stuck with that. Janet is rolling her eyes. [Laughter]

CHAIRMAN BERNANKE. Vice Chairman.

VICE CHAIRMAN GEITHNER. This may get us slightly ahead of ourselves, but I think it's important to what we're asked to do now. It makes sense to get people to focus on how comfortable they are with what has been on the table regarding the range of options on projections and to say what they're comfortable with and what they're not comfortable with. But as I see this plan, you're still building in some time for refinement over the next several months to get this to the point where it's ready for prime time. So I don't think you're asking people—you really can't because you're not quite there yet—to commit right now to views on all specific attributes of this. It seems to me you're a step short of that. Broad elements of the package on projections would then provide a basis for the subcommittee and the staff to refine this further over the next several months. That's what I understood the plan to be. I think you're right, Cathy—there's a lot here. You can get a lot from asking people to give that broader orientation and still recognize that this is going to need a little refinement. Is that fair, Don?

MR. KOHN. Yes. As Vincent pointed out, we'll have another round, a practice round this time and maybe even another one.

CHAIRMAN BERNANKE. Are there other questions for Vincent?

MR. KOHN. I had, Mr. Chairman, a timing question. Vincent, you said that including the write-up of the projections with the minutes—either as a separate document or

integrated—might argue for not shortening the time. But how could we do that with the Chairman's testimony? Doesn't that actually force the shortening of the time?

MR. REINHART. Well, I would make a distinction between when the Committee approves the document and when the Committee releases the document publicly. You might not want, for instance, to release the minutes before the Chairman's testimony because it does sort of step on that message.

MR. KOHN. I agree with that.

MR. REINHART. But if the write-up is in Committee-approved minutes and a Board-approved Monetary Policy Report, you're going to have to figure out a mechanism by which the Committee signs off on the write-up so that it will be the same in the report. The possibilities are that if it is an annex or a drop-in portion of the minutes, the Committee may very well need to have two editing schedules—that is, comments on the narrative would have to be finalized by a certain date so that it could go into the report and comments on the complete minutes could take longer. That's one possibility.

CHAIRMAN BERNANKE. President Pianalto, do you have a question?

MS. PIANALTO. Yes, I have a question on the timing of the Chairman's testimony. Are those dates set by law?

MR. REINHART. The law says no later than February 20 and July 20. In practice, the Committee sometimes allows for some slippage. The last few times it has tended to be earlier than that. So that does put a *T* in terms of your planning horizon. You also have some flexibility about when you schedule the meetings.

CHAIRMAN BERNANKE. I understand that the doughnut truck has arrived.

[Laughter] So give us a twenty-minute break for coffee, and we will continue this discussion.

[Coffee break]

CHAIRMAN BERNANKE. Why don't we reconvene? We had some hurried consultation during the break about how best to proceed with this discussion. Breaking with our usual practice, we decided that it might be best for me to begin and to provide you with my sense of a broad schematic of how I see us going forward with our communications, in particular with the projections, which I view as being central to our plan. I note that people can justifiably complain that they haven't had enough preliminary information for this discussion, which I'm about to give you. But let me also say, first, that there will be, of course, opportunity to react in the round to follow and, second, that we will continue to poll you and to consult with you and that we're not going to be finalizing this for some time yet. So in the interest of trying to give you something to react to, let me just present an overview of how I see this going.

The extended projections that we have been experimenting with can be a central critical element of a new and expanded communication strategy that will, in fact, address many of the concerns that were raised today. I'll be very explicit about that as I go through this. In particular, what are the elements of these expanded projections? First, I recommend that we extend the projection horizon. We have used a third year in our experiment so far. I think that might be the right solution, but let me just leave open for discussion the possibility of either using a fourth year or replacing the third year with a third through fifth year average or something of that sort—sort of a long-term average. Second, I

recommend that we release this projection quarterly. That would mean approximately quarterly because the calendar is not conducive to an exact quarterly release schedule. That would mean that two of the projections would appear in the context of the Monetary Policy Report. This is not a central concern, but my thought at this point would be that we should revisit the Monetary Policy Report and try to make it more informative. There is a lot that we could do to make it better—to include more information, include boxes, and essentially make it a more-effective publication. That would be, as now, twice a year. Perhaps on the off quarters we could have a small release of some sort, or we could include the projections in the minutes. That's one of the issues that we need to discuss as we go forward.

Third, I think that in our projections we ought to project a total inflation measure. As many people have noted, there is confusion—and even some resentment, I would say—about what appears to be our excessive attention to core inflation. Projecting a total inflation measure throughout the projection would, first of all, clarify that our definition of price stability is in terms of total inflation and would give us opportunities to explain in this document, in speeches, and elsewhere not only why we do look at core inflation, how we use core inflation, and its role as a forecasting mechanism but also—as President Fisher and others have mentioned—that it's not a necessarily sufficient statistic and that we should look at other things as we try to forecast overall inflation.

I would go even further here—just, again, to be concrete. I've wavered myself on thinking about which particular measure. I've had discussions with the staff, and I am not wedded to anything in particular at this point, but currently I am leaning toward suggesting that we use the PCE deflator as our measure of inflation. It's a technically better measure. It uses chain weighting and has a lower weight on shelter costs, which have their obvious

problems. It has disadvantages: There is a significant nonmarket component, for example. An argument can be made for the CPI on the grounds that it is better known although, as has been pointed out to me, if we begin to really focus on the PCE, it may endogenously become better known. Another point to make here is—and I don't want to get too distracted with this—that since there is a fairly stable wedge between the PCE and the CPI, we might be able to use the CPI in some of our communication as long as we're clear that we are not picking and choosing as far as our objective and our definition of price stability are concerned.

Another component of the projections that we have been doing, which I think is very valuable, is adding a considerable amount of both qualitative and quantitative information to our projection. That includes, in particular, our explanation of the qualitative material that we have been submitting—describing the forecast, the risk to the forecast, the sense of uncertainty that we have, and so on—and I think that will be very valuable. As I said, we can combine this with other supporting information. There are various ways to do this. There could be a separate document four times a year. It could be in the minutes. I suggested one possibility, which is to include it in the Monetary Policy Report twice a year and keep it in the minutes or as a separate document on the off quarters.

Let me talk a bit about what this would accomplish for us, and then I will summarize that at the end. First of all, the public is very hungry for information about the Federal Reserve's outlook and our sense of the risks to the economy. We have, as I have noted before, the best forecasting group in the world. We have useful information to add to the debate. By providing that information, I think we can help people make better decisions and understand policy and the economy better. In particular, the more we are forced to explain

our predictions and our forecasts, the more credible we'll be and we'll be inviting discussion, reaction, and debate that will, I think, make our projections better. One of the advantages of transparency is that we begin to interact more with the outside world.

Second, I think we should assume optimal monetary policy. I had some other ideas before, but in the end, I think that's the right thing to do. An important implication of assuming optimal monetary policy is that the projections therefore become essentially, as everyone understands, a plan for how we propose to steer the economy, if you will—subject, of course, to all the qualifications of uncertainty, forecast problems, and so on. It gives an explicit road map with reference to both sides of our mandate about how we expect our policies to move the economy toward our objectives over the next three years. I think that's very important for a number of reasons, such as accountability and transparency. But let me give you an example of where I think it's particularly useful.

One issue we have been discussing is the appropriate period for achieving price stability, and two suggestions are out there. One is sort of the standard Bank of England approach, which says that we have a two-year horizon. We have certain concerns about that. In particular, it doesn't necessarily take into account, at least not explicitly, the state of the real economy, the initial conditions, how far we are from price stability, and so on. Another possibility is to say, well, it's just an aspirational number. It's a long-term number. We don't have any particular schedule for getting there. People have raised the obvious objection: Where's the discipline? Where's the credibility associated with that? So, as we understand this, we can explain to the public that the projections go a long way toward solving this problem because they show how far out we think we have to go to get to what

we and the public view as being reasonable levels of price stability. So it does in a very important way solve the problem of the appropriate horizon.

Now, I should add a point that will come up, which is that one could object that the projections are not the same as a Committee forecast. We are not going to come together and make a single forecast that the entire Committee buys into, except to the extent that we do have consensus building, which we will have over time in our meetings. That aspect of it could be viewed as a lack of clarity. However, the aggregation process does reflect unique features of the Federal Reserve, including its institutional structure, the large size of Committee, the geographical dispersion of its membership, and our longstanding willingness to accept and encourage diverse views within the Committee. So we won't be forcing some kind of artificial consensus. There will be opportunity for disparity. In particular, I would recommend that we provide information to the public about the cross-sectional distribution, as we already do. But my inclination—and people can react—would be to provide the entire cross-sectional distribution to convey the sense of uncertainty or the sense of dispersion of views, and that will be informative in the same way that the votes in the BOE's Monetary Policy Committee are informative. However, as in the case of the Bank of England and other banks, even though we won't be having a common forecast, nevertheless—as I think we have already seen—the preparation of our individual forecasts does create a certain amount of discipline and has been useful for us in thinking about our forecast.

A very important question is what is conveyed by the third-year projections, and I think that they are at the heart of the innovation created by this step. Assuming that we're not too far from the steady state initially, which I think characterizes our current situation, it

is evident that the third-year projections—or, alternatively, the third through fifth or however we decide to do it—reveal a lot of information about our views on sustainable long-run growth; our views on sustainable unemployment; and, of course, our views of what price stability is. I simply take note of the fact that the latest projections show the central tendency of the Committee's inflation objectives to be 1.5 to 2 percent on the core PCE deflator. I actually—and I'm speaking entirely for myself—would be not at all displeased if that became known as the Federal Reserve's comfort zone or informal definition of price stability. First, it's a compromise among different views. Second, I realize that I'm complicit in the 1 to 2 percent comfort zone, but I do note that the lowest twelve-month core PCE, in 2003, was 1.27. I don't think we'd be comfortable with inflation rates below 1 percent even though we're obviously willing to tolerate inflation rates slightly above 2. It's not symmetrical, and I think that the comfort zone revealed by our third-year forecast would be reasonable and would provide useful information.

Some would be concerned that we're also providing information about the Committee's views on sustainable growth and sustainable unemployment. I am not that concerned about it. I think that a transparent Committee should do that. However, for those who are concerned about possible risks, I'll point out that Committee projections will have a lot of dispersion that probably will essentially encompass most reasonable estimates of these variables. Moreover, there will be forecast errors around those projections, and as we get information about productivity and other factors, we will be able to update those estimates. I don't think that they will be a major constraint. I think that they will, in fact, just provide some information to the public.

I note that some participants have talked about an opportunistic approach to disinflation, which still seems to have some adherents around the table—that is, people who may say, “Well, I’m sort of for 2 percent now, but I can see over time, if the opportunity arises, very gradually moving down to 1½ and so forth.” Obviously, the revealed preference shown by the third-year projection doesn’t distinguish between those things. One thing that might happen—and I don’t think it’s necessarily a bad thing—is that, if opportunistic disinflation happens and those individuals therefore lower their projections, the Committee’s projection might drift down a bit. I don’t think it would drift up. I think there would be a strong resistance to that. But it would be responding appropriately to changing conditions, and I don’t think it would change very much; so the fact that it would not be literally rigid is not necessarily a problem to me.

Some thought will have to be given to vocabulary, how we describe these things. I think that I will myself want to talk about the Committee’s projections. It’s not quite right to call them a target because we will not have agreed universally and chosen a number once and for all. That being said, I think that the normative implications of the number will not be missed by the public, and that it will do a lot to clarify people’s views on what the Committee is trying to do and will also be useful for internal discussions. In particular, in testimony, speeches, and the like, I would use the projections as my reference point as I talk about what the Committee is trying to do, where we are heading, and what we think is the best way to get there.

So let me summarize what I think this component of our communication strategy could do for us, noting that some other things could come in the package—perhaps faster minutes, changes in the statements, and so on. But let me just talk about what I think is best

for us. First, it is going to allow us to provide considerably more information to the public and in a more timely way because it will be quarterly. Second, it will give us an opportunity to clarify how quickly we intend to move toward our objectives. It will give us a way to deal with the problem of the horizon. Those of you who were at the St. Louis Fed's conference on inflation targeting in 2003 might remember a paper by Board staff members Jon Faust and Dale Henderson in which they talked about inflation targeting as being focused on the mean of the objective but needing also to focus on the variance. What they mean by that is the speed with which misses are fixed and that some regimes are not adequately constructed to deal with that. Again, this would allow us to be very explicit and very accountable about how we return to our objectives.

Third, it would allow us, again, to move to total inflation as our objective and to clarify how we use core inflation as an input into forecasting total inflation. Fourth, it would clear up the current confusion about comfort zones and individual views. We're not going to take a vote on the particular number, but I think a reasonable way to proceed is to consider the range of third-year projections as being a kind of consensus view of what most of us think is an appropriate measure of price stability. Again, I think the normative implications will be clear. Fifth, it will improve our internal discussion and decisionmaking. We're already seeing that. In fact, it has highlighted some problems that we have in our communications and in our coherence. This will help, I think. Sixth, it respects the Fed's unique institutional structure, the nature of its Committee, its governance procedures, and its attention to diversity of views. Moreover, it builds explicitly on a communication device that we've been using for thirty years. In that respect, it will look in some sense as incremental even though I think it's very substantive. But I think with its incremental

nature, the transition risks—be they market risks, political risks, and so on—will be more moderate than they would otherwise possibly be.

So this is an outline. I know that some of you may think that this is a bridge too far. Some of you will think that I've only started on the road to Damascus here. [Laughter] As I said, there will be an opportunity now to go around as you talk to give any reaction you might have to this. Also, I have not been very specific about the questions raised in exhibit 1 that Vince put out. These things bear on the details, but I'm pretty flexible about them. I think I'd like to see the minutes moved up if possible, consistent with doing all of what I've described. Otherwise I'm pretty flexible about this.

Let me just say a few other things about going forward. This, together with the other elements, is part of an ongoing process. We're not going to lock this down. I will ask the subcommittee to continue in existence. Certainly we're going to have to move forward, if we all agree that this is the direction that we want to go, to implement the details of the minutes, the Monetary Policy Report, the collection of this information, and so forth.

I would like to talk about the whole package, whatever we come to, in the fall—that is, in the next three or four months. I will surprise Don by saying this. It would be very nice if I could have something to point to in October, but it's certainly possible and I think it's very important for us to move deliberately. If that's not possible to do in a safe and clean way, then we could wait until January to actually deliver some product. So that is a question. I think that what will happen is that we will see the reaction we get. We will see how the public and the markets respond. We may have to take further steps. When we see how this goes, the markets and the public will tell us what they need to know that we're not yet telling them, and then we can move it still further if we need to. But my sense is that,

with some of the details that we need to work out—and your comments are more than welcome, as they are with the entire vision—as a central part of a package, this would move us in a good direction. So I'm going to stop there, and we'll have a go-round. Did you have an intervention?

MR. HOENIG. I have just a question. In communicating the projections, what are you suggesting there, Mr. Chairman? Is it four times a year that we would put the projections out with commentary?

CHAIRMAN BERNANKE. Yes.

MR. HOENIG. Okay. Fine. Thank you.

CHAIRMAN BERNANKE. Let me give Governor Kohn a chance to lead off as the chairman of the subcommittee, and then we'll have a full go-round. Don.

MR. KOHN. Thank you, Mr. Chairman. I agree with and strongly support the path that you've outlined for us for the reasons you've articulated so nicely. Let me add a few things and then give a few specifics. I think this would be a very important contribution to enhancing the understanding of the public, the markets, and the legislators about what we're doing and why. Just to emphasize something that you just mentioned, Mr. Chairman, this systematic approach to thinking about the risks and the symmetries and the asymmetries around the risks will be very useful in our communication with the public, and a systematic and regular approach to talking about the changes in the forecast will be very useful to explaining to the public how our forecast is evolving. From my perspective, these explanations are among the most important things that we can do. The write-up that President Hoenig was asking about is key here. To my mind, the forecast is really a framework for putting all of our explanation, our write-up, in place, and is a disciplining

process for explaining our thoughts about how and why the economy is evolving. I think it's more those explanations than the specific numbers that we use to educate the public about what we're thinking, how we think things are developing and, looking at the risks and the uncertainties, how we're likely to react to incoming information. This would put that endeavor on a much more systematic track than it has been in the past when it has relied from time to time on ad hoc speeches by the Chairman or on mentions of it in the announcements, minutes, or whatnot. So I think this will be very good.

I agree with you that the third-year forecasts are mostly people's preferences for the long run. I admit to being that opportunistic disinflator to whom you were referring. Maybe there are others around the table. I don't know. I wrote down 1.9 for year three, and I might prefer something a little lower over time. But given the starting place, I thought the welfare benefits of going down to 1.8 or 1.7 or even 1.6 or 1.5 were less than the welfare costs of the potential unemployment that we would incur doing that. I'm also somewhat skeptical about the credibility bonuses from making announcements. But obviously, I wouldn't have written down a number that wasn't very heavily influenced by my objective over time. So the public will be correct in interpreting those third-year numbers as pretty much where the individual members of our Committee want to go even if it's not exactly the right number. I note that the 1.5 to 2 that's in our forecast is not that wide a range. It's narrower than the inflation targets of some countries, like New Zealand and Australia. So it won't contribute that much to uncertainty. I also note that in Mike Leahy's charts yesterday the inflation compensation changes in the United States over the past couple of months were about the same as in the inflation-targeting countries. I don't think there's a huge amount of uncertainty about what we're doing. Now, some people might think that the inflation

expectations are tied at too high a level—I think that President Plosser pointed that out. But I don't think that the public is afflicted with a whole lot of uncertainty about what our objectives are relative to some other, inflation-targeting countries.

I see this as sort of a risk-management approach to talking about our long-run inflation objective. We get this out there, see what the reactions are, see what kinds of questions there are, and then proceed. If it looks as though the right thing to do is to actually vote in the Committee about what our long-run objective is, we can do that then. But we haven't gone that extra step, which we will never be able to take back again if there's some sort of reaction that we haven't anticipated. The Federal Reserve is in a very different place relative to our democratically elected representatives than a lot of other central banks. We report to the Congress. We don't have a Minister of Finance or a Chancellor of the Exchequer that intercedes between us and the Congress. The Congress has given us goals in words and not in numbers, fortunately. I wouldn't want them to give us goals in numbers. There were some numbers in the Humphrey-Hawkins Act, which on the unemployment rate were potentially quite damaging if we had gone for them. They haven't asked us to put numbers on these goals. They haven't looked at this for ten years, but in the mid-'90s when the Senate looked at this, they didn't go anywhere with it. They rejected it. So I think we are out in front by doing this. If there were to be a backlash against even this limited step, then at least we wouldn't have committed to something that might provoke a bigger backlash. So I see this as a step toward possibly specifying price stability numerically, a step that helps to manage the risk that it might provoke some reactions that we would have trouble living with. So I'm very strongly in support of the path you outline.

I think the subcommittee needs from the rest of the Committee some answers even before we get to the specifics here. So, do you agree that we ought to proceed with an enhanced projections process like the one we've been going through the past two times? We might have some specifics. Should we do it four times a year? I think we should, but not everybody might. Are we doing approximately the right variables, noting that we'll have to adjust our price variables? I agree with you, Mr. Chairman, that adding total inflation to the core is a very good idea, and we ought to use the same index for both of those, whatever it might happen to be. So we'll do some adjusting.

Do you agree that there ought to be a write-up of these projections more or less like the one that the staff has produced, approved by the FOMC so that it is an FOMC document, and released to the public? Now, we might discuss exactly what's in that document. Like you, Mr. Chairman, I kind of like the histograms of how many people were lined up at the particular answers to give a sense of the dispersion of views on the Committee; they are much easier for me to look at than the central tendencies and the broad range things, but not everybody might agree. So I think there are some questions even before we get to "Are you satisfied with the general thrust of where we're going?" I think that's what we really, really need to know more than other things.

Let me address some of the things in exhibit 1. I like the sharing of forecast submissions anonymously. I guess I'm concerned that if it was by name, it would potentially be harder to change your mind at the meeting. It would put pressure on those submitting to have more-elaborate submissions. My sense was that I got the information that was important to me about where people generally were. I thought the way we provided information on the federal funds rate path was useful as well. We need to

recognize that as we go forward with this—I hope we go forward with this—there will be public pressure on us to release the underlying federal funds rate path. I think we need to go into this with our eyes open. That pressure will be there, but we need to resist that pressure. The process that we used last time worked pretty well. But let's be aware that there are risks associated with releasing what we think is the path of the federal funds rate going forward. Some central banks are doing that now, small central banks or small countries in the north and the south, in the Antipodes and up in Scandinavia. Let them experiment with this for a while and see how the market reacts and how that interfaces with their own decisionmaking processes before we go down that path.

I also like the change in characterizing uncertainty in the risks around the forecast. That is, here's a table. Include that table. How do you feel relative to that table? I think the table will help the public understand how little we know about the macroeconomy. [Laughter] One thing that concerns me about the projections process and delivering these things is the decimal point—to the right of the decimal point. There's a bit of a risk that we would be perceived as knowing that there's some difference between 1.7 and 1.8 percent inflation—that we can really determine it—and I think that including the table will tell people that's not really the case. So I think it is important that the table be in there.

Regarding in what form the projections should be released, your thought for two times in an enhanced Monetary Policy Report—in February and July—and two other times—either in the minutes or in a separate document released around or just before the minutes, but really just being that enhanced write-up—strikes me as right. So two updates that are very compressed and not much more than what we agree on and then the two

Monetary Policy Reports in which they would be embedded strike me as the right way to go.

In terms of finalizing the projections, as I think Vincent noted, I'm of the view that we shouldn't be updating our projections except from what we hear at this meeting. The projections we release are how we explain what we did; why we did it; and when we sat around this table, how we saw the path forward that influenced our decision. As for information that comes in after we leave this table, we will not have had an opportunity to digest it or to discuss it and its implications among ourselves. So, yes, if we want to update our projections after the meeting, I would have a very narrow window, and the update would be based on the information you heard at the meeting.

In terms of the minutes, as indicated by my question to Vince, as a general principle I'd like to shorten the time before they come out. President Poole, I can't speak to a specific advantage of dodging one piece of data or another, but the minutes are a very good, nuanced view of what we discussed and why we made the decision. I found it always very helpful to have them out there when I give a speech or answer questions, particularly when I answer questions from the audience and I can't control what I'm saying. [Laughter] Right. Freudian slip. Let's see. We'll clean that one up in the transcript. [Laughter] I think the sooner we get the minutes out there the more helpful they will be for the public and for all of us who are out in the public, but we can't put so much pressure on this process that we don't have an appropriate review. The words will be even more important, particularly four times a year. I'm not quite sure how all of this fits together with your testimony and all that, but if we can, I think we ought to shorten the time. I think the minutes have approximately the right level of detail in them now. Some central banks give much more detail about what one

view was and another view was and what one person said and another person said; but with nineteen people sitting around the table, that would be impossible. So I think we're there. Also I like the idea that President Poole suggested a couple of years ago and I think Vincent did as well, of taking that stuff about the past, the first eight pages or so through the staff forecast and making that a staff document. So we could say, "As background for the meeting, the staff prepared or supplied the Committee with the following information." However they want to do it—if they want to make it part Greenbook or whatever, it is their thing. At the least, that takes it out of our hands. It helps us with the editing process. It helps them with the editing process. So I think that would be a helpful innovation. Thank you. I am sorry to have gone on so long.

CHAIRMAN BERNANKE. That's okay. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. We were asked to comment on a long list of questions concerning economic projections, the minutes, and the statement. In addition, Governor Kohn has put out the broader question of the general thrust of the direction we're going in, and I'd like to focus my remarks on the latter. Frankly, right now I think the most important question regarding the release of our projections concerns the relationship of these communication devices to our inflation objective. Everything else is more or less small potatoes right now. I believe it would be a mistake to release our projections without agreeing on it and communicating a Committee inflation objective. It's inevitable; in fact, it's intended the way you described it, Mr. Chairman, that participants' third-year inflation projections will be interpreted as the equivalent of an objective. I think this would be problematic without an explicit statement of an objective for a number of reasons.

First, our projections display a nontrivial dispersion, admittedly a narrow range, but market participants are going to have a keen interest in whether we believe a 1.9 percent inflation rate, say, is too high or just about right. Financial market participants already believe that there's a dispersion of the Committee members' preferred inflation rate and that it lies between 1½ and 2 percent. I note that showing that every individual preferred inflation rate spans a range of 1½ to 2 percent is not equivalent to the Committee's deciding that its collective preferred inflation rate is for anything within a band of 1½ to 2 percent. So I don't think this is going to enhance the clarity of the public's understanding of our intentions much at all.

Second, communicating our inflation objective via three-year-out projections would accomplish little by way of enhancing any commitment since we'd release the projections anew three or four times a year with the implication that our implied objective could change over time. I'll remind you again about my brother-in-law doing retirement benefit projections, just to make the important point that a significant part of the value of an announced objective is to reduce long-run uncertainty about inflation.

Third, our inflation projections would be displayed alongside exactly analogous projections for unemployment and GDP growth in an exactly analogous way. This would confuse people about the economics of monetary policy. In that context, how do we convey that we do not have numerical targets for unemployment or growth? How do we convey that inflation is a variable that we control in the medium and long run, but we cannot peg growth or unemployment at any one number in a sustained way? In other words, how do we remind people that the long-run Phillips curve is virtually vertical? A related consideration is that, if we present our projections this way and do not clearly state our

inflation objectives, it's not hard to imagine someone in the Congress trying to hold us as accountable for our unemployment projection as for our inflation projections. This would be a dramatic step backward for us, I think.

Fourth, and probably the most pressing and immediate problem in my view, publishing our projections this way will do nothing to improve the clarity of our internal deliberations or to alleviate the problems we have and will continue to have in writing statements in the absence of an agreed-upon objective.

For these reasons, I believe that the release of economic projections containing participants' forecasts for inflation three years out would be a poor and ineffective substitute for an explicitly articulated objective and would be problematic without such an objective. Now, let me be clear. I do think we should move ahead in this direction, and I applaud your leadership, Mr. Chairman, for putting something on the table today at the outset of the discussion. I just think we should do this in conjunction with the inevitable other step of agreeing on what we're about here in the Committee. I can appreciate the sensitivity to the likelihood that various politicians may react to our communication of an explicit numerical objective; but over the past thirty years, politicians have reacted to many of our actions that were integral to our successes over that period. We should decide honestly what we believe is best for the country and communicate it clearly and with confidence. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

VICE CHAIRMAN GEITHNER. Mr. Chairman, may I?

CHAIRMAN BERNANKE. I'm sorry. Vice Chairman.

VICE CHAIRMAN GEITHNER. So, President Lacker, is it your view that if we're not at this point prepared to announce a quantitative definition of the Committee's long-term objective, that we should not do a third-year projection?

MR. LACKER. Yes.

CHAIRMAN BERNANKE. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. I very much support the proposal that you've outlined here. I think it does not tie our hands as individuals, which was one of my concerns originally. It allows us to do our work as members of this Committee and to put our information out there for our colleagues and for the public to judge, and I think that's very important as individuals on the Committee. I think that the third-year projections are helpful. They do take on the tone of a goal. There's no question about that, but I don't think that it's necessarily bad at all for us as individuals; and I don't necessarily think the fact that we have differences is bad for us as a Committee so long as we're clear about our analysis for that. So I'm very supportive of that.

I would move the minutes up if at all possible. I think they have served us well. We still work very hard on the statement, but the minutes have de-emphasized the importance of the statement because they clarify, and the sooner you can clarify through the minutes, the better the public is served. So, yes, we should proceed. I like four times a year. Now, how do we do it in terms of the description and so forth? That's something I think we'll experiment with over time. I really do like the histograms. I think they give a very clear piece of information to the public and to each of us. So I'm very supportive of them as well. The variables you have are just about right. I prefer the CPI, as I have in the past, but I certainly wouldn't fall on my sword about it. I think getting this out is more important than

whether we do the CPI or the PCE. I do think total inflation is very important—it helps clarify things for the public and allows us to explain the difference between it and core. If I had my choice, I'd stay away from the fed funds rate path. Appropriate policy or the way you have described it is fine. Using uncertainty in explaining it is extremely important because it is an uncertain business over time.

I would not have revisions; they distort what we had coming in. The minutes should describe parts of the discussion and clarify things for us as we go through it. So redoing the projections afterward serves no real useful purpose to my mind. I think we should move forward on this as you've described it here. I like your summary of what doing it accomplishes. Thank you.

CHAIRMAN BERNANKE. Thank you. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. I, too, want to thank you for putting this proposal on the table. I think it will help this discussion, and I find myself agreeing with everything you recommended actually. I'm a little frustrated. I can't find anything to disagree with. [Laughter] But let me mention a few nuances. On the question of whether it is helpful to do this in the absence of a quantitative inflation objective, I think that on balance it is. It does move the ball forward. In line with Bill Poole's question earlier, it's an incremental step, but a very significant incremental step forward and one that on balance will help provide more information. If at some point in the future the Committee decides to have a quantitative objective, it would be an important part of that process. In any case, you'd have to do it as well.

On the questions that Don Kohn asked us to comment on specifically, I think that, yes, we should proceed with the enhanced projections and four times a year is a good way to

do it. I like the total inflation approach, looking at it on a long-term basis, because it clarifies the confusion between core and total, and over time they should clearly be the same. Regarding the write-up, my recommendation is to put it as an appendix to the minutes to keep it as simple as possible. I think that putting it as an appendix simplifies it because then you can just lift it out and use it those two times a year for the Monetary Policy Report, and it just eliminates any possibility of confusion between the two. If the timing of your testimony before the Congress is such that you need an expedited process for that appendix, it's easier to do it that way. It just simplifies it for everyone, and there's just less risk of confusion. I think it would be easier for the staff as well.

I like the idea of the three to five years, by the way, for the longer term. That is helpful in terms of explaining this to the public. I know some people are concerned that it raises questions about what potential output is and so on, but you're giving a range, and I think it helps just to explain the complexity of this. Having the longer-term period would be helpful as well.

Getting back to Vince's specific questions here—should we share them? Yes. I like the way you've used the fed funds rate path, and I like the uncertainty and risk. About finalizing projections, I agree completely with what Don said. The information should be what we have in hand at the time of the meeting because we all should have the same cutoff point for the projection, and that's the logical cutoff point, and then maybe give people a day or two to update them or modify them based on what they heard at the meeting. But it should be a very clear cutoff—the day of the meeting.

About expediting the minutes, I guess I would have one disagreement here. I disagree with Don on this. The benefits of expediting them would be very minor compared

with the potential costs in terms of additional staff resources that would be needed. I think we have it just about right now. Again, if you shorten the schedule, you can't lengthen it again. So I would just keep it where it is now.

I just mention one other little aspect, and that relates to the histograms. I agree we should use them—they will show the outliers in the projection, which is fine. Again, using them shows the diversity of views. There is a risk here that some of the outliers may over time want to move more to the center, but so be it. I don't think that is a great risk, but I think it is something we should recognize might occur here. So on balance, I think the proposal you have put forth is very, very good, and I agree completely with it.

CHAIRMAN BERNANKE. Thank you. President Pinalto.

MS. PIANALTO. Thank you, Mr. Chairman. I, like President Moskow, find it very difficult to find any disagreement with what you propose. I'm very supportive of the approach you've laid out for the reasons that you articulated so clearly. I support extending the forecast period. You mentioned going to a third year; you also suggested maybe a three-to-five-year average. I'm leaning toward the three-to-five-year average because I had proposed a five-year extension of the forecast period—the two years that we currently use and then adding the fifth year. But your three-to-five-year average makes perfect sense to me.

I'm very supportive of using a total inflation number. President Hoenig mentioned that he had a preference for the total CPI and so do I for the reasons that you mentioned: It's a measure that the public currently understands, and it gets a lot of publicity. But as you point out, if we start using the PCE deflator, the public will start to focus on that measure. I like the approach of having quarterly releases of our projections. That seems appropriate.

Last year we saw that when we release our forecasts only twice a year, they can become outdated rather quickly. So giving more information on a quarterly basis would allow us to keep our forecasts more current. I would like us to spend more time talking about whether we assume an optimal policy because, as Governor Kohn pointed out, we're going to get pressure to release our fed funds rate path because people are going to want more clarification of what we mean by "appropriate" monetary policy or "optimal" monetary policy. Finally, I like the fact that your approach retains the current structure of the Federal Reserve System and allows us to give our own forecasts, letting the public see the diversity of opinion around that forecast. We are going to have to discuss when it will be appropriate for us to talk about our individual forecasts because, once we start to give the public more information about the Committee's views on certain things, the public will want to find out where the differences are. Then we will have to have some agreement about whether it's appropriate to talk individually about how we see our differences from the Committee. But these are details that we can talk about with more time. In general, I'm very supportive of the approach that you've laid out today.

I know we've been asked to answer some of Vincent's questions and respond to some proposals that Governor Kohn put out, and I'll just make a few comments. I do want to proceed with the projection. I mentioned that quarterly would be fine. Regarding when the projections should be finalized, I support doing it at the end of the week and using the same rules that we use for the minutes currently—not to bring in new data that we receive. In terms of the benefits and costs of further expediting the minutes, I think, like President Moskow, that the benefits are minor compared with some of the costs. The current process

is giving more time for members to give thoughtful input into those minutes, and I wouldn't want to change that. Those items complete my comments. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. As some others have said, I want to applaud your leadership in laying out a proposal for how we think about this. It's important to have a framework on the table for thinking about where we want to be. I would add that generally I agree with almost everything you said. I think it's a good way forward. I view this as a step, not the end game. It's part of a process in which we evaluate what we're doing and how we do it. While I share in principle President Lacker's concern about the potential risks associated with doing this without agreeing on explicit objectives, I'm willing to bear those risks because, since most people around this table know where I'd like to be in terms of that, I think the risks are acceptable in the short run as a means of getting us to that ultimate objective. I think that this will help us as a Committee become more comfortable with being more transparent and more communicative and that the process in itself will help us get to where I think we ought to be. So from that standpoint I'm very supportive of this direction. I support going through with it under the guidelines and broad outline that you described.

As to some of the specific things that Governor Kohn mentioned and we talked about, as I said, I want to proceed. I think four times a year is right. The details of the Monetary Policy Report to the Congress are just a detail. We can work them out. Somebody is better at figuring that out than I am. I think that shouldn't be considered a stumbling block. I support moving to total inflation. As I said both yesterday and earlier today, I think that's important. I'm marginally indifferent between total PCE and total CPI.

Earlier I had advocated the CPI. I'm still perhaps at the margin, but to me that's not a big issue one way or the other. I agree on the timing—the forecast and the projections ought to be based on information available at the meeting, not subsequent information. In fact, that's very important in what we're trying to communicate about our decisionmaking process. I'm fairly happy with the way the staff has crafted the language. I think they have done a pretty good job of capturing the sense. I'm rather indifferent about whether we incorporate it into the minutes directly or we make it an addendum. Again, I think the markets and this group can live with it either way, and people who read the minutes will come to understand and accept it one way or another.

The two points with which I have some trouble or perhaps a little disagreement with Governor Kohn's comments concern the optimal policy and whether we reveal what's implicit in the fed funds rate forecast going forward. I think that revealing a dispersion or the varying underlying policy assumptions that people are using going forward helps on the issue of uncertainty—that the world is uncertain and that our understanding of the way the macroeconomy works is uncertain. By revealing that some underlying sets of assumptions that we on the Committee are making to get to this set of objectives are different could actually be very helpful in reinforcing the view that the future is uncertain. Therefore, rather than locking us into some path, it may end up, in fact, opening up options to us in a way that we might not have had before. So I think there's actually potential information there that we're providing to the marketplace that may be valuable. Giving this area a bit more thought might be worthwhile.

The second point is one that President Pianalto just mentioned, and it just occurred to me after she mentioned it. I realized that, if we submit these forecasts anonymously and

if they're reported anonymously, even though the dispersions and so forth are reported in the minutes, we as presidents and as Board members are out giving speeches all the time about our outlook for the economy. At the end of the day, we are unlikely to stop giving out information about what our views are. It's a little like hiding it over here, but everybody is out talking about what their view is anyway. So I'm not sure we are buying anything real by being anonymous about our forecasts. I guess I'm in favor of revealing more rather than less—revealing more about our uncertainties or our assumptions underlying the future path of the fed funds rate and having that information convey some uncertainty—and being more transparent, because we are anyway, about what our individual forecasts may have been in talking about that outlook. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman Geithner.

VICE CHAIRMAN GEITHNER. May I ask a clarifying question before I speak?

CHAIRMAN BERNANKE. Sure.

VICE CHAIRMAN GEITHNER. This really goes to the remarks of President Moskow and to the relationship between a narrative to accompany the projections and the description in the minutes. If you did that model, which as I understood it, President Moskow, is to incorporate a narrative as an appendix to the minutes, how then would the description of the outlook that is in the minutes now—the narrative description of the central tendency of the Committee that now goes in the minutes—relate to the narrative description about the projections? What would be the relationship be between those two things, if you did them as separate but linked documents?

MR. MOSKOW. Obviously, the two would have to be drafted very carefully to make sure that they are in concert and that there are no inconsistencies in them. But I

think doing so is clearly manageable because one is a set of longer-term projections and the other is a discussion of the shorter-term outlook.

VICE CHAIRMAN GEITHNER. So that is the distinction. You would say the minutes are the description of the near-term outlook that underpins our judgment about the decision at the meeting, and the annex would be more of a focus on the description of the medium term?

MR. MOSKOW. Yes, whatever the timeframe is for the projections.

CHAIRMAN BERNANKE. Governor Warsh.

MR. WARSH. Isn't there a third alternative? The minutes are what we actually discussed, and the other thing is a story. I think President Moskow's question really relates to whether or not we are going to try to weave what we actually discussed into some coherent story or try to make the minutes really be what I suspect they were originally intended to be, which is what the color and commentary of our discussion were?

CHAIRMAN BERNANKE. I think I would just note, Vice Chairman Geithner, that Jim Clouse wrote a version of the minutes that did a pretty good job of integrating them. It gave the projections with the long-term overview and the underlying forces, et cetera, and then the rest of the minutes, as is our wont, in sort of a sector-by-sector discussion of mostly developments in the near term. But you raise a good question. I think we should keep that in mind.

MR. FISHER. Mr. Chairman, may I ask—was that the draft that Ms. Danker sent around?

MR. REINHART. Yes, the appendix to Debbie Danker's memo is the draft that Jim Clouse prepared. I think the Vice Chairman is correct in that, of course, there would be some repetition in the discussion of the minutes just because the sector-by-sector discussion of the near-term conjuncture is going to be somewhat similar to the longer-term structure of the three-year or the three-to-five-year forecast. But they would serve different purposes, and that repetition might not be unhelpful.

VICE CHAIRMAN GEITHNER. Okay. So, Mr. Chairman, I am very supportive of the path you laid out. I think it basically is the optimal balance today between what the consensus of the Committee will bear now on the merits and what our unique institutional structure as a central bank permits. Now, your view and the Committee's view of that balance may change over time, but I think what you described has to be pretty close to the optimal balance of those needs today. What is the objective of this exercise? I think I am completely comfortable with what you and Don said in terms of the broad objectives of what we are trying to achieve through these enhanced projections. But I think fundamentally that it is important to recognize that we are not principally trying to give a lot of detail about dispersion and variance within the Committee. What we should try to do mostly is to give more texture around the central tendency view of the Committee about the likely evolution, the desirable evolution, of the economy over a two-to-three-year, maybe longer, period so that people have a better sense of what informs our basic judgments about the appropriate stance of monetary policy. We should make sure that we keep to that objective as we think about what to put into a proposal regarding enhanced projections.

On the specifics, I am fine with a third year. I would like to discuss a little further the merits of three years versus three to five years. I think the tradeoffs between the two are very interesting, and I want to say something about that in a bit. I am fine with quarterly. I agree that we should have projections on both headline and core and that they should be based on the same index, not different indexes. Before we decide to go to PCE and core PCE, again, we should discuss how to think about what it will be like to live in a world where we still have TIPS paying the CPI. We still have a whole bunch of survey-based measures reporting the CPI. If we're going to give a lot more emphasis to the medium-term implicit objectives of the Committee in some quantitative sense like this, we should think through whether it will work or be comfortable over time. I agree that this should be done on a view of optimal policy that is undisclosed for the reasons that have been put in favor of that, although I think President Plosser did a nice job of explaining the alternative view.

I would also be in favor of expediting the minutes on the grounds that I think there is a lot of virtue in saying that you want to have a short period between what we say about what we did and why we did it and the greater narrative texture that has to come in the minutes. The longer the gap between those two things is, the greater the risk that you have two events with signaling impact on monetary policy rather than one. This is complicated to do and must have some cost, but I'd say that a bias toward collapsing the two as close as possible is the right bias.

On the third-year question, Mr. Chairman, you talked about how you would describe what people should infer from the third-year projection about the objectives and preferences of the members of the Committee individually. My own bias would be to

still try to qualify heavily whatever we say about the meaning of that third year. If we believe, as you've said many times I think, that one wants to think about the period for bringing inflation back down to objective as something that will probably have to vary based on the circumstances, it is really important not to set up a dynamic in which people view that third-year projection as our fixed objective for that horizon. We want to have a fair amount of flexibility for a view of the appropriate path of inflation over time to change meeting to meeting and not be too locked into a judgment about that. So I would say that I am inclined to keep that softer for all the reasons the proponents of a flexible horizon have laid out.

There is virtue in laying out the central tendency of the Committee's view about what the appropriate path is likely to be today, but there may be circumstances in which we want to be above target or objective for a longer time than three years. Again, our view about that path might actually vary meeting to meeting. So I would want to soften that up a little. But as we elaborate the package and the drafts of how this gets presented, people will have a chance to look at whether the balance is right.

On dispersion and what we say about dispersion across the Committee, I think the histograms have a lot of appeal, and I have been in favor of them and of disclosing them in the past. But I am a little worried about the following: There is some risk that they are demystifying. Either the dispersion is going to look too wide, or it is going to get kind of narrow. If we had to decide today, I would be inclined to say for this next step that we should use the narrative description rather than the histogram to characterize dispersion. One reason is that we don't have nineteen people doing independent, fully fledged, internally consistent forecasts with a fully elaborated view that is independent of the

Greenbook's view of the structure of the economy and its evolution. We are not like the respondents to the Survey of Professional Forecasters in some sense, and so to have a histogram presented of nineteen different views with this degree of diversity and what goes into that gives probably a bit too much emphasis to the quantitative number of the individual views with which people come to the table. But they are very appealing as a device for conveying uncertainty, so that's the virtue. I would say maybe start with trying to put more texture into a narrative description rather than in a histogram.

The issue about the relationship between the narrative description that would accompany the projections and the minutes is something we need to think through more carefully. I'm still uncomfortable in that I think what we want to do is to try to give people a little more sense of the story that defines the central tendency of the Committee about the likely desired evolution of the economy—of output and inflation. The part of the minutes that talks about the outlook shouldn't be too narrow and shouldn't be too short in its horizon. In many ways, we are making a broad judgment about the forecast horizon at every meeting. I don't know what the solution to this is, but I would think through the relationship a bit more carefully, and my inclination is to go for integration. Four times a year we do minutes like today, and four times a year we do something that has more texture, more detail, and a little bit more on the medium term and has some tables accompanying it. Again, what we should try to do is give people more of a sense of the view of the central tendency of the Committee that informs that judgment about the appropriate stance of monetary policy over time. To view them as separate, distinguished things leaves me slightly uncomfortable, so I think the topic deserves some more thought.

On timing, Mr. Chairman, in terms of it launching in October versus January, I think we should defer to your basic judgment about what makes sense. My view is that you should set a dynamic in motion now that gives you the option of doing it in October if people are comfortable enough by that time and if it looks as though the state of the world at that point would be conducive to this kind of announcement. But I think that you want to make sure before we go forward that you have a good sense of how we're going to describe this, what it's really going to mean, and how we handle all the obvious complicated questions that we're going to get.

Is this enough? Will it leave us with an unmanageable set of problems internally in how we think about decisions on monetary policy or externally in terms of the ambiguity it still leaves in the market about what our objective is? Let me just say a few things about that. I don't think it is right to say that the market is fixated particularly on the question about whether our implicit view about what we'd like to see inflation do over time is 1.5, 1.75, or 2. I think what the market wants, really, more than anything is to know what we are going to do with the fed funds rate [laughter] at the next meeting, the meeting after that, and the meeting after that. They would like to know more about what we think about the economy, but really what they want to know is what we are going to do with monetary policy tomorrow. It is very important—as you read that people complain about the ambiguity we live with today, have lived with for several decades, and are likely to live with in the future about what we are going to do to inflation over time—to remember that what they want to know is what we are going to do with the fed funds rate tomorrow. My own sense is we can manage, as we have managed in the past, with a framework that leaves the present degree of ambiguity about our

objective unresolved. There is a lot of value and flexibility in that ambiguity. I don't view it as a particular vice. I don't think that there is any compelling evidence to support the view that the burden that ambiguity presents today is unmanageable—certainly not relative to the past two decades. Of course, we can evolve further. As the Chairman said, we should view this as an evolutionary process. We should be prepared to revisit over time each judgment we make and to continue to explore whether there are things we can do beyond this to improve the way monetary policy works in the United States. So I think it's not right to think about this as the beginning with a clear evolution for something beyond this. It is also not right to view this as the end. I think you should view it as this is what is next, and we'll continue to think through things that might help us do monetary policy better over time. That's all I've got.

CHAIRMAN BERNANKE. Thank you. President Minehan.

MS. MINEHAN. Thank you very much, Mr. Chairman. I, too, would like to thank you very much for presenting your thoughts at the beginning of this discussion. It was extremely helpful to my thinking through what comments I wanted to make at this meeting. I have also found Governor Kohn, Vice Chairman Geithner, and everybody else who has talked very helpful in thinking through some of these issues.

I am very much in favor of the forecast process that we are working on. I don't think we have it totally right yet, but I think we're headed in the right direction. It's a great balance because, as opposed to establishing right now an inflation objective that would sit out there for all time—maybe that's the direction in which you want to head in the future—it characterizes over a longish term—and I am attracted more to three years than to three to five years—how we see the balance of things working out in the economy

and what we think it is possible to do with our inflation objective over that period, given the other factors that we need to think about in the economy and that are important, both to us and to everybody within our economy. So using these forecasts and putting a third year out there that describes what the balance of things would be given an appropriate policy path is something with which I could be very comfortable.

I like the way that Vice Chairman Geithner talked about beginnings and ends. One thing that I've been struck by in this whole communication process is how hard it is to move backward once one starts to do something. It is nearly impossible to take it away. So as we think about beginnings and ends, we need to be very careful about taking a step at a time. Even though it might seem reasonable to take five steps, we should try one, see how it works, and then move on from there. Giving a forecast four times a year; going to three years, not three to five; and showing the balance of things and the range in which the Committee would see those things turning out would be, I would say in harmony with Vice Chairman Geithner, "a good step."

I agree with four times a year—that's a good frequency. I was kind of drawn to some of Vice Chairman Geithner's thoughts about whether or not to integrate this with the minutes. I came into the meeting thinking that it would be better as a separate document appended to the minutes that, if the timing worked out well, could be put into the Monetary Policy Report or could stand on its own. I tend to think of the minutes as a discussion of what happens at the meeting, focused on what we used to think of as the foreseeable future, which never was three years. It was always two or three meetings ahead, shaping the stance of policy over the near term. So I was on the same wavelength as President Moskow. The minutes describe a set of circumstances around which one is

shaping current policy. Of course, they are related to the longer run, but that is a story that can be told somewhat independently and might be told better independently than woven into the minutes. But I think there is a need to think more about that—Vice Chairman Geithner had some interesting thoughts.

I think anonymity is useful at this time—again, I am thinking that, once one takes a step forward, it's hard to go back. I like the histograms myself. They are personally informative. However, I think if we accompany at least the first round of these forecasts with histograms, it will be somewhat like throwing red meat at a tiger. We have had those boring tables in the Monetary Policy Report for thirty years. [Laughter] You know, the variance in the range, the outliers—they have been there the whole time. The market could have made a lot out of that, but it never did, not too much anyway. I think that we might be better off with a more boring approach as a first step into this four times a year—say we did it, write what it was about, give the table, but don't give all these red histograms that seem to beg everybody to worry about the outliers. I don't think that is going to be helpful to us in terms of discussing things.

I know we are probably running short of time, and I can't go through all these questions in the same amount of detail. Let's see, on that basis, I think that we should go forward four times a year and forecast a three-year time horizon. I like the idea of total inflation. Every time we have talked about this I thought that, if we are going to set a target, it should be in terms of a longish term in total inflation. I would be more inclined to the CPI. I should mention that I heard your comment that, if we focus on PCE, sooner or later everybody else will. That's what we thought about ten years ago when we started talking about PCE, and over time people haven't. PCE is there, but the CPI still is very,

very common in terms of how people talk about inflation and the economy, and things are still linked to the CPI. I do think that we need to give a little more thought to either the CPI or PCE, and looking at the total as well as the core is very valuable. I don't think that we should update our forecasts on anything other than what we heard at the meeting. There haven't been many updates in the past. I wouldn't expect there to be that many in the future, so I would think either the same day of the meeting, the next day, or the following Friday, depending on when the day of the meeting is. Fine, give people time to update their forecasts based on what they heard at the meeting but not on new data that are out there.

Okay. Let me see if there's anything else. In terms of the benefits and costs of further expediting the minutes, I agree that there would definitely be costs to doing so. There may, however, be a benefit in that we might be able to get to the objective that we initially had of trying to make the statement after the meeting more streamlined. To me, that would be a significant benefit of expediting the minutes. We could focus the statement on what we did and why we did it and not try to make that a vehicle for some longer-term reference, but rather leave that to the minutes and then four times a year to the forecast. So I think there is a benefit to expediting the minutes. From a process point of view, people have to be able to get encrypted information on their Blackberrys and not be forced to carry their laptops with them every single place they go. If we expedite the minutes, that will become even more of a burden, I think. In a memo, Vince talked about delegating approval. I would not do that. The principals have to be the ones to approve the minutes. If we decide to expedite them, we have to facilitate that process so that the

principals can weigh in in a timely way on the minutes. Did I miss something that somebody wants to hear about?

MR. KOHN. The Yankees. [Laughter]

MS. MINEHAN. Probably not. Okay. That's it.

MR. KOHN. We'll ring you up in retirement. [Laughter]

MR. MISHKIN. How about the Red Sox?

MS. MINEHAN. My prediction is that they will stay in first place through the All-Star break. [Laughter] I think that's safe enough.

CHAIRMAN BERNANKE. Governor Kroszner.

MR. KROSZNER. Thanks. I also want to say that I am very supportive of what the Chairman and the Vice Chairman said. I really think this threads the needle for getting, as Vice Chairman Geithner said, the right balance. We get to provide more information with greater clarity and greater accountability, and I think it will also lead to greater credibility without being perceived as inflexible or challenging the dual mandate. Some of the questions and concerns that I raised in my interventions earlier indicated that I was supportive of an inflation goal, but I said it was a close call. For me, this is not a close call. It really addresses a lot of the potential concerns that I had. I also think it's extremely good in putting us on the proper evolutionary path. As you well know, everything at the Fed moves at a pace that is likely to be measured [laughter], and so this should operate on that same pace. It allows us to understand how the new numbers will be perceived. As a number of people said, it is very hard to move back, but this gives us some experimentation and a clear movement forward. It allows us to think about appropriate risk management, as the Vice Chairman said, at least at this stage,

particularly given that not everyone is on board with a particular number. Even if everyone were on board with a particular number, I think a more difficult thing would be that, if you are away from that number, what the right path is to get to it. I actually think that is the most difficult thing to get consensus on. This gives us a little more flexibility on that without making any particular commitments. It provides some credibility without raising something that could potentially be more problematic. Also, it allows us to harden this if we so choose. If we're finding that we're not getting the credibility benefits that we might hope from this, we can go forward.

On the specifics, I think there is consensus on many of the things that have been said, so I won't go through the individual pieces. Just let me mention a couple of things. Actually, along the lines of what the Chairman said about focusing on PCE and the endogenous response that there will be more focus on it. I think that is, to some extent, correct. I also think that there may be some issues on existing contracts, and so it is an important point to think about.

The point that President Lacker raised is also an important one to think about: How are these different numbers going to be perceived? Obviously, we are focusing a lot on the particular number for inflation, but we are putting these other numbers out in the same format in the same way. This raises questions about growth goals, employment goals, the NAIRU, and Phillips curve tradeoffs, about which we certainly—or at least I certainly—wouldn't feel comfortable in making commitments. That actually leads me to desire to put out just a third-year forecast rather than a three-to-five-year forecast, at least at this point because I think it reduces the chance of misperception and allows for greater flexibility of how we want to characterize it. It allows us to go forward and characterize

it more as a goal, if we so choose and there isn't confusion. But if we say three to five years, it is hard to step away from that being a particular goal. I am not saying that we don't want to do that down the line. But at this stage I think I'd feel a bit more comfortable in sticking with the pace that is likely to be measured and just adding a year on that.

Again, on this endogenous response, if we do this quarterly, we are likely to generate a request for quarterly testimony from the Chairman, and that response becomes more and more likely the more independent we make this document. I'm not saying that anything is wrong with that, but I think we should just be aware of it. The Chairman should be aware of what he is getting himself into [laughter] and make sure that he feels comfortable with that, although I don't see any problem with it. I just think that it is important to think about. With respect to the question about whether or not it should be anonymous, I think it is valuable to have the projections out there but to have them be anonymous. The main reason for anonymity is, as you well know, that a reporter will ask, "Don't you think that President X is completely wrong?" Talk about red meat in front of a tiger. That is exactly what people like to look for. They like to look for dissent. Although there could be some benefits, I see attribution as mostly a downside—trying to generate dissent among people, which I think is not particularly productive.

I do broadly like the idea of expediting the minutes. Getting information to the market sooner and when it is fresher is more valuable. But I am sensitive to concerns about the downside risks of people being unable to weigh in and of excess burden on the staff. So we have to get that balance right. But all other things being equal, I prefer sooner rather than later. Making sure that we are available to give feedback or can get

minutes securely in a more expedited process is a relatively small price for the nineteen of us to pay to provide fresher information to the public. With that, I would also say that we shouldn't revise our projections beyond the day of the meeting because the minutes should be about the meeting. They shouldn't step on or confuse things, and expediting them makes that kind of revision even more sensible. So I am very much on board with this type of proposal. Thanks.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, you spoke of the road to Damascus. I was thinking about the movie "What About Bob?"—not because of my own neuroses about this exercise but because I think it is important to proceed with baby steps, step by step. President Minehan's point is cardinal: It's very hard to go back once you move forward. As I wrote in my memo of June 4, I believe it was, I think that you have summarized one of the most important things that we can do as a Committee, and that is to get a useful and credible inflation metric. Not only do I applaud the overall outline that you started us off with—and, again, thank you for bringing that outline to the table because it organized the conversation—but also I am a big believer in the need for us to come up with an inflation metric that is credible. Tim's point on the PCE versus the CPI is very important to consider. As I have said before, I am more in favor of the CPI, but I do think we need to think that decision through in terms of the different instruments that are out there in the market and the precedent that has been set.

Now, I just want to make a couple of points. On the road to Damascus, we have to think of what the milestones are going to be. I want to be careful that we don't labor under a conceit of false precision. I worry sometimes that, when we look at these

histograms—and I want to come back to the histograms in a second—the reality is that only 20 basis points separate these things. The further we go out in the time horizon—you know the old saying that you only put something three points to the right of the decimal point to show that you have a sense of humor—we have to be very, very careful not to imply that we have ultra precision. We don't have ultra precision; this is a judgmental business. So that is one point I would like to make.

I have very mixed feelings about the histograms. After listening to this conversation, I would suggest that we start with the central tendency analysis—the table that was put together. The problem with histograms, besides giving us a sense of false precision, is something that a couple of the Presidents and Governors pointed out or hinted at and Governor Kroszner just pointed to but I thought that he didn't go far enough. Even if we do it anonymously, if we were to publish these, the press is going to poke and poke and poke—the red meat argument that President Minehan gave—and ask, “Who are the outliers, and why?” Once the press starts doing this, it is just a matter of time before a Congresswoman or a Congressman does the same thing. We row as a crew, as a team, and I want to be very careful that we don't take any risk to undermine the unique aspect of this body. We sit around this table. We have differences of opinion. I noticed Governor Kroszner pointed to me when he said, “This guy is wrong.” It was just the way you were pointing. [Laughter] I realize that sometimes I am a total outlier here, but that is in the spirit of the comradeship that exists at this table. You put this out for the public, and I think you run certain risks of undermining the authority of this Committee, the authority of the Chairman, and the integrity of the process. The federalist process that

we have is of value. Let's be careful that we preserve it and don't make this like every other Washington institution, because we are unique in the nature of our integrity.

Just a couple of other comments. I'm very wary, as I outlined in my letter, of being open about the fed funds rate path we envision. This is our central policymaking instrument. If we were to forecast it, I worry that we are going down a slippery slope. We would be under pressure to validate our forecasts by our actions, and I think we need to preserve some of the mystery that surrounds them. I remind you that FF does stand for "full frontal," so I want to be careful, again, not to give the markets a full frontal view but to preserve some of our power.

With regard to the frequency with which we do this exercise—again, if we do it baby step by baby step, I would like the Governors to be mindful of the fact that the Presidents run businesses. We have other things to do. I think Vice Chairman Geithner pointed to that indirectly. This is not the only thing we do. We don't have our own models. If Governor Kohn and the Bank Affairs Committee are willing to give us a few billion dollars more to build our own models, then we are happy to take the money. [Laughter] But the realism is that we key off the staff and off the FRB/US model. If you really look at all these numbers that were given out, not a whole lot of variation is there. We need to acknowledge the fact that we don't have the wherewithal and that a lot of this is guesswork. The further we go out, the more it is guesswork.

One last point: I like your suggestion, Mr. Chairman, of the three to five years. As I have made clear, I have the opposite fear of President Lacker's. I think that what President Lacker suggests puts us right into an argument with the political authorities about what our employment target is. This is a nice way to skirt the issue of formal

inflation targeting and, in my view, inevitably being forced by the Congress into employment targeting. I support your suggestion that we use a three-to-five-year range. It is a nice, elegant way to get us out of a possible box. Yet if we decide to go down that road in the future—again, in this “What About Bob?” baby-step approach—we can do that later. I wouldn’t start out there. I think there are too many risks. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Poole.

MR. POOLE. Thank you, Mr. Chairman. Clearly, from the discussion so far—and my prediction is that it will continue this way—there is a tremendous amount of support for the outline that you have presented, and I share that. I want to focus on two points that Richard raised and maybe hit them a little harder. First, on the fed funds path, the fed funds rate is the policy instrument. We don’t want to confuse the public about the difference between the policy instrument and the policy goals. If we want to present something, we ought to present the policy rule by which the fed funds rate is determined. We don’t know how to do that beyond the broad outlines of the Taylor rule, and that is the point that we should be emphasizing. So I am very opposed to presenting a fed funds rate path because I think it is really going to confuse our communication.

Now, on the issue of false precision, I want to use an analogy because I hope that it will help to explain this issue. Let me use a GPS analogy. If I did my calculation correctly, GPS coordinates usually show up on your instrument down to a thousandth of a minute of longitude, let’s say. If I did my calculation correctly, that’s about six feet. For some policy purposes, perhaps locating the piers on a suspension bridge, you would really like another digit. But the GPS instrument can’t produce that other digit. If you

were to try to do it with repeated trials, you would just get random garbage. Therefore, if you are locating bridge piers, you have to use a different measuring device. Now, Don said, “What is the difference between 1.9 and 1.8?” Well, that is beyond the measurement accuracy of a lot of the data. It is not just that it doesn’t have very much policy relevance, but it is really beyond the measurement accuracy, and we have multiple measures of inflation. We take the PCE index, and we look at it with and without the nonmarket components. Those relationships change, and therefore we are really making a mistake if we force ourselves to make these judgments to 0.1 percentage point. In the projections, we ought to round these things off to the appropriate number of significant digits. Standard scientific practice is not to present measurements that run beyond the accuracy of the measuring instruments. So what is the appropriate number of significant digits in this business? If you look at the nature of the revisions, the multiple measures, and so forth, I would propose that for GDP and inflation it is probably 0.5 percentage point. For the unemployment rate, it is maybe 0.25 percentage point. But we are really going to tie ourselves in knots over stuff that is like the fourth digit on your GPS instrument. It just doesn’t have any measurement validity to it.

Part of the problem in presenting the histograms that are organized around these very fine intervals is that they will display differences that are totally insignificant and don’t amount to anything. But if we present it, people will start thinking that we must think it means something. So I think we really will aggravate the communication process, and therefore we ought to look at what the appropriate number of significant digits is. I am not trying to obfuscate the differences. I am trying to make sure that we focus on differences that are genuine. If we have a real difference that is 0.5 percentage

point apart, well so be it. There is no reason in my view that we shouldn't present it and explain it.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I strongly support the proposals that you have laid out. I appreciate your doing so. They have helped focus this discussion. Besides agreeing with the proposals, I also agree with the reasoning that you have set out as to why this is the right step and why it is an important step. It doesn't go all the way to having a single agreed-upon inflation objective, but I do think it's a major step in that direction. Given the political realities and sensitivities and the differences of opinion and comfort level with moving wholly in that direction, I think this is a very constructive step. It moves us forward, and it doesn't preclude other measured steps later on. It would worry me to take this step if there were a huge difference among us about the quantitative definition of an appropriate price stability objective. But it is clear that the range of difference is not very broad; $1\frac{1}{2}$ to 2 in the grand scheme of things seems to me to be very minor. Certainly, at this point going out to a third year, it seems to me, will be very informative to the public.

I really like the idea that, having talked about our individual comfort zones, we will be able to get out of the current phase of being very reluctant to talk about this topic at all. It would be good to express in our own speeches something that reflects a Committee objective. I think that $1\frac{1}{2}$ to 2 as a range of what we think of as price stability is adequate and will be useful. It will let us clearly explain our objectives and our strategy for using monetary policy to achieve them, which is something we really haven't done much of, and I think that's a good thing to do.

I am really torn about your proposal about whether or not we should go beyond three years. We are lucky at this point that we are awfully close to the range that we think we would like to be in. But if at some future date we were a lot further from the objective, I could easily imagine—given my own view of the tradeoffs between the employment and inflation goals—that three years would be an insufficient period for you to look at my projection and see what my view of price stability was. So at some future date, having a range as short as that could be problematic. However, going from three to five years has a disadvantage in that we will, in effect, be laying out something that the Congress is likely to view as an employment goal or an unemployment goal, and I am worried about taking that step. So I am really torn about it.

Just a bit on a few specifics—I think that four times a year is appropriate. I like our sharing our projections among the Committee members; it has been helpful in understanding what other people think and in facilitating our own discussion. I think the staff has done a wonderful job of producing the narrative. A major thing that we can provide to the public is to lay out our reasoning about the economy. It is being nicely done, and I think we really have that in good shape. I like the idea of a total inflation number. I like the CPI because of its familiarity but could certainly live with the PCE as well. I like “appropriate policy.” There have been a lot of concerns in the Committee about projecting the fed funds rate. In the past I have been where President Plosser is now in terms of wanting to reveal that to the public, but many good reasons have been advanced in our discussions about why we shouldn’t do that, at least for now. With respect to the concern that, if we are very specific in our own submissions, it will eventually become public, my own feeling is that, in this round, just asking people “Do

you agree with Greenbook?” or “Are there any significant differences?” has been quite informative and is sufficient.

I like the treatment of uncertainty in this round. Asking people to put down their own numbers was false precision—I really didn’t like that. Providing some table of model-based or forecast-based historical averages is very helpful if combined with some qualitative discussion. I am a little worried about the histograms. They are nice graphical devices. But are they really informative about something we want to inform the public about? I share some of the concerns that have been expressed about outliers and whether or not we want to focus attention on them. With respect to timing of the forecasts, I really think we should not be adding information in those projections that goes beyond what we had at the meeting. It will be very confusing if we try to do so. I feel that we should have the projections finalized either on the day of the FOMC meeting or shortly thereafter but not based on any additional information.

With respect to publication, I agree with President Moskow’s thoughts that putting the projections out as an appendix to the minutes is desirable, though we will have to be careful about what we say in the discussion. We can then also include them in the Monetary Policy Report. I do like the idea of expediting the minutes, especially if we figure out a way to be able to read them on our Blackberrys. We ought to be able to do that—most of the compression in time to cut it down to two and a half weeks comes in terms of our own response time. I think that we can respond quickly, especially if we can get them while we’re traveling. I like the idea of being able to use the minutes in our speeches. We have not yet talked about the statement, but I think getting the minutes out more quickly will also take a little pressure off the statement. If the staff can find a way

to write the first part of the minutes and we can present it as the staff's information that they brought into the meeting, that will also take a burden off the minutes, and I hope it will take some burden off the staff.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. I also think that your straw-man proposal really does strike the right balance, and I strongly support it. We probably owe it to you between now and the fall, or whenever you feel appropriate to be able to go forward with an announcement, to keep our discussion in this room. Our confidentiality around this discussion for the past year has been incredibly helpful, and it does strike me that your ability to frame something that fairly represents your views and our views without having any of it previewed by us, wittingly or unwittingly, is awfully important.

In terms of additional reasons that I think we have the right balance in your proposal, there has been a discernible difference in the markets in putting data-dependence into practice. In seeing how the financial markets have reacted to data sets and how they have struggled with what those data have meant, I think that they seem to have come a long way from a year or two years ago in understanding how we process data, rather than looking at the width and depth of our briefcases or the winks and nods of our statements. I can't help but think that we have really made some progress down that path. By putting the projections first and foremost on our list of deliverables to come, we are going to continue to ask them to do their own homework as opposed to relying on us. If we were to go a step or two beyond that at this point, we might undermine some of those good market practices that are starting to bear some fruit.

The markets judge us by our actions and not by our words, and that is why I must say that I don't think any of these iterations or any of these proposals that we have discussed is a panacea in and of itself. These proposals and iterations constitute an appropriate framework for us to continue our dialogue with the markets. By taking this next step we are going to put some of our words into action by generating these projections quarterly and seeing what responses we get. I tend to think that we are going to learn quite a bit through that process. As others have said, while the economic environment is apparently benign, I think that the political environment and the financial markets are probably somewhat less so. Maybe that suggests to me another reason for taking appropriate steps and not going beyond them at this point. Finally, I don't think the financial markets are asking for more than your proposal suggests. I think Tim has it right in some ways—they are still just asking for the answer key. What we are doing here is finally telling them that we are not going to give them the answer key but that we will tell them more about what we're thinking. That will be more than sufficient to that constituency, and over time we can revisit what we are doing.

In terms of details, I will refer to only three items. First, on whether we should be making our projections under appropriate policy or sharing a fed funds rate path, I am incredibly concerned that policy forecasts would be misunderstood to be policy commitments. Again, I think that would undermine much of the good work that we've done. Second, regarding the anonymity of projections and the points that President Fisher made, I am a little uncomfortable with even these numbers of 1 through 19 with each of our projections because I think that the veil that we have around us could well be pierced. Another way for us to get the benefit of that might be for us to individually

submit our projections to the staff. Then when the staff circulates them for us to review, they would have the projections aggregated to the extent that we can see granularity but not be listed as numbers 1 through 19. Obviously, that can be done a lot of ways. But I am very concerned that, if we were to go with individual projections, we would have calls and speculation that would make us all hunker down and somehow explain why we are where we are and be somewhat less interested in hearing where our colleagues are or in modifying our projections over time. So I would favor even a step back on anonymity—but only enough, obviously, to give us a view of where our colleagues are.

Third, the question that requires probably the most time among the issues that have been raised is the third year versus some three-to-five-year average. I could change my views on this, but my instinct is that, if we were to adopt a three-to-five-year window for that set of data, it might look just a little too cute. I would prefer that we all do our best to say, “This is about projections.” As we get into a third year, our crystal balls are cloudier than they are over shorter periods. Over time, if we were to do that with a third year, in our own ways and our own speeches, we could be elaborating on what that third year means to us. To some of us it might be aspirational. To some of us it might be opportunistic. But I would hesitate to go further than that at this point. But, again, I think this is the right path forward, and obviously discussion will continue. Thank you.

CHAIRMAN BERNANKE. President Plosser had an intervention.

MR. PLOSSER. Yes. I just want to make one comment about the issue of the fed funds path. Both Vice Chairman Geithner and Governor Warsh made a comment about the markets. When I hear you talk about the markets, I am struck that it is a very narrow definition of what the markets care about. You are looking at it in the context of what the

financial markets care about is only what the funds rate is—what our path is going to be. I think that is much too narrow a way to think about what we are trying to do here. To say that they don't care about inflation and that they care only about the funds rate is a slippery slope. Whether it is just a financial adviser who is worried about inflation planning for his clients or people who are investing long term and trying to make decisions about housing or other things, I think it does go back to inflation. It is not just about what the markets think the fed funds rate is going to be. In that regard—I am going to go out on a limb a bit here—to the extent that longer-term decisions or the prices of longer-term assets, such as longer-term bonds, move frequently with short-run funds rate decisions—sometimes more, sometimes less—that really tells us something about what they are expecting the path to be in the future. They are trying to infer something about our future path from one decision. To the extent that we can provide some more certainty or shape to that path as it relates to our inflation objectives or our inflation ranges that we want to talk about, we are going to change that dynamic between short and long rates in a way that will remove some of that uncertainty and some of that speculation about what the path is going to be, even though we can at the same time convey some uncertainty about our individual perspectives about that. So I think we want to be careful not to become too focused on what tomorrow's market response will be and what they care about because I think it goes beyond just that. I just wanted to share that with the group. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. If I could just add to that. I had a similar reaction to Vice Chairman Geithner. When we targeted money supply growth, markets reacted to money

supply growth figures because they thought we were going to react to money supply growth. If Red Sox victories influence a fed funds rate setting, the market would react to the Red Sox. Obviously, we are going to manipulate the fed funds rate in response to inflation. I don't think that is going to drop off the table anytime soon. So it sort of sounds great to say that they don't care about inflation, that they care about the fed funds rate. Well, they are going to care about inflation if they care about the fed funds rate.

VICE CHAIRMAN GEITHNER. Perhaps I could say my piece again, just so he didn't misinterpret it. Of course they care about inflation, and of course they care about whether we are going to competently deliver acceptable inflation outcomes over time. My only point was to say that even if you gave them clarity on an objective at a certain horizon, in quantitative terms, fundamentally they would still want to know how you are going to achieve that, and you are still going to leave unmet their principal demand. Of course they care about inflation, and we care about inflation. But I believe that the differences they are concerned about today—a central tendency that has a 50 basis point spread on it—are small compared with the uncertainty that they would like us to resolve about how we are going to react to stuff. What they really want is something that I don't think we can fundamentally give them. They really want more certainty than we have at any given time about how we are going to react to a changing world, and they would like us to resolve the mystery in what the future will hold about the evolution of the economy. It is important to recognize that. But you are right, of course they care about inflation and how we're going to react to inflation.

CHAIRMAN BERNANKE. President Minehan.

MS. MINEHAN. I would just like to add a comment in favor of uncertainty for the markets. Uncertainty is important in how markets work. Uncertainty is critical to market participants forming their own views about the future and managing the risks as they see them in the future. Everybody talks about the famous Greenspan put. We know Greenspan is going to be there to save us if the market overdoes it, so let's just play into the rising market because the Fed will save us if everything tanks. That is an overdone argument, but I have heard it made. If we give people a policy path, no matter how we characterize it, they are going to take that as far more a given than we could ever really commit to, and they are going to make bets on that basis. When those bets don't work out, it is going to be another version of the Fed leading them down the garden path. I really think we should not go there. We should encourage some uncertainty in markets about what our actual policy path is going to be, given that over a three-year period or a three-to-five-year period the range of the Committee's preferences around inflation is within some narrow band. Let the markets figure out what they think incoming data prescribe in terms of policy and make their bets on that basis. I think a certain degree of uncertainty is absolutely healthy for markets.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. I thank Vice Chairman Geithner for clarifying his views. I couldn't agree more that there is a vast range of uncertainty out there about which we can't help markets and they can't help us. We would all like to know more about the future. That is why it is imperative, to me at least, that we focus on resolving the uncertainty we can resolve. Foremost on that list would be our coming to terms with decisions that we eventually will have to make about our intentions. Just leave it at that.

CHAIRMAN BERNANKE. President Stern.

MR. STERN. Well, I, too, strongly am in favor of the direction you have proposed, Mr. Chairman, and the reasons that you laid out for moving in this direction. I would urge us to move as promptly as is practical down this path. I am fairly flexible about many of the specifics that would accompany this path because I think there is more than one way to skin the cat and I think it is important that we get there.

Before I get to some of the specifics, let me just say that I went back and looked at a fairly recent chronology of our changes to communication going back to 1994. I don't know whether I got everything; all actions were not equally significant; and of course, we don't have the counterfactuals, so we don't know what would have happened had we not taken these steps. But I think it is fair to say that all our increases in communication, beginning with the press releases back in 1994 up through the expediting of the minutes and so forth, with the benefit of hindsight have worked out well. They have worked out well in part because we give these things pretty careful consideration and long deliberation before we move ahead. I think we have done that in this case as well, and so we are well positioned now to move ahead with this.

As far as some of the specifics go, yes, I would be in favor of the quarterly frequency. For now I would favor sticking with the three-year horizon. I am not particularly opposed to a longer one, but at least to date I think the three-year horizon would be a significant advance. It seems to have worked out reasonably well as far as the trial runs are concerned, and I would do that. In terms of the general shape of the latest trial run, the level of anonymity, and so forth, that was all fine with me, so I wouldn't see any need to make any particular changes with regard to that. With regard to the form in

which the projections should be released, I think I would come down in favor of President Moskow's suggestion as some sort of appendix to the minutes. I think that will give us more flexibility over time and it will not be a big problem to make sure that whatever we say in the minutes is consistent with those projections. I think that is a manageable issue, so I would favor that. I would also favor cutting off the projections as soon as possible after the meeting for a couple of reasons. One is that not doing it raises the potential for confusion of what we know and when we know it, which we can and should avoid.

I also think that we don't really want to put much emphasis on high-frequency data. Just because you get one or two more observations, most of the time they don't make much difference; but even when they seem to indicate a significant departure from what we had expected, they are subject to revision or the next observation we get a day or two later may work in the opposite direction. It just doesn't seem to me that there is a lot of advantage to emphasizing them.

I would be in favor of expediting the minutes, but I think I would defer that for now, just because we are talking about some major steps. We ought to get those in place first, and we can come back and think about expediting the minutes shortly thereafter, assuming that this all works out well, if that's what we want to do. There are probably good reasons to do it at the end of the day, but I don't view that as quite as important as some of the other things we're talking about at this point. With that, that's all I want to say. I think we are in the process of making some significant progress here, and I am encouraged by that.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I, too, applaud your putting a concrete proposal on the table. With a Committee of nineteen, and as many moving parts as this could have, we could end up with a camel when we wanted a horse, and therefore having something concrete to react to is very helpful.

Having said that, I have looked at this question both at the strategic level and at the tactical level. Let me just comment on the strategic level first. The way I process the question is that it is based on principles in some respect, and some of the principle-based objectives are (1) transparency in governance is a best principle in general, and this moves in that direction; (2) it should enhance accountability; (3) it should enhance public confidence in our credibility; and (4) it should enhance the influence on outcomes—that is to say, it should have a grounding in results and the optimal outcome should involve somewhat less risk. I am trying to process the thrust of my decisions through that strategic prism. So I asked myself under what circumstances this could backfire, and I think the answer is perhaps that in periods of very rapid change, volatility, turbulence, severe shocks, and the aftermath of severe shocks, we could find this degree of explicitness and degree of openness problematic. But I don't think we can manage to those kinds of contingencies. I think we have to manage more with a view of normal times.

I see here in the Committee some tension, as we address this question, between a mystique model of effectiveness, which perhaps optimizes flexibility and gives us an opportunistic posture and, therefore, is built around closed deliberation and a transparent, explicit, exposed, “out there” model. They both have some benefits in terms of our ultimate effectiveness. So I view it as a bit of a balancing act between those two. But, as

I said, I support the thrust because I think the principle of transparency and accountability trumps that of maximum flexibility, if those two things under certain circumstances are opposed. I am influenced, Mr. Chairman, by your and Don Kohn's sense that this is incremental. It is a step and, therefore, is adjustable. It may not be reversible, but it is at least adjustable, and that means that we can tweak the overall tactical aspects of it to get it to work as efficiently and as effectively as possible.

As to some of the specifics, yes, we should proceed. Four times a year seems right, and I think we have to line it up with the Monetary Policy Reports. I like the idea of total inflation because I think that is where people live for the most part. I see the narrative best done as an addendum. Regarding anonymity, I would say that not being anonymous might be too much disclosure, so I support anonymity. On the third year, I think of the third year as a statement of intentions. It is our intended steady state, if we can get there. I do see a tradeoff there: Having a single third year is more consistent with accountability, but it puts credibility a bit more at risk. So as I listen to the debate on that, I am somewhat influenced by Vice Chairman Geithner's approach of allowing for more flexibility in the outyears. This is not a moon landing. We can't be precise in where it comes out in the thirty-sixth month. We are in a world of shocks and uncertainty, so I, on balance, favor the idea of buying us some flexibility in the three-to-five-year timeframe. I like the qualitative characterizations, particularly of uncertainty, for the same reasons. I am not terribly in favor of accelerating the minutes for now. We could do that at a later date, after we have refined and nailed down some of the other moving parts here. I don't think it buys us enough at this time, so I would view that as a refinement that might be made at a later date. Let me leave it at that.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. Thank you, Mr. Chairman. I share many of President Lacker's concerns, but I come to a different conclusion because I strongly support this proposal. It is a major step, but it is incremental. But I'd like to go through some of the issues that President Lacker discussed because I think that they relate to where we may be heading in the future and how we may have to handle things now. The concerns that he raised are very, very important ones.

The first is that a third-year or a three-to-five-year projection does not reflect a commitment. We know that there are some very strong benefits to having a commitment. A particular thing that's important here is that being opportunistic in terms of changing what our view is of where we will head in the future creates very bad expectations dynamics. In fact, it creates an anti-stabilizing influence rather than a pro-stabilizing influence because, when you overshoot, you might tend to have higher projections. Similarly, when you might undershoot, you might lower projections. This has become an issue, by the way, in other countries. In countries that have inflation targets, when they were undershooting for a long time, people actually pushed them to lower the inflation goal. Doing that turns out to have very negative effects on the economy because, when you get a negative shock to the economy, people lower their expected inflation. That raises the real interest rates and means that you have a contractionary impulse. That's very problematic and a serious concern that we have to worry about. I'll talk about how I think we can deal with some of these issues.

Second, I also very much worry about the issue of the projections. Although they have the benefit of giving information about what people's views of our inflation goals

are, they could be interpreted in relation to output and unemployment as also being speed limits, goals, or whatever. In the end, that is a very dangerous thing to happen.

The third thing that I think is an important concern is that, without a consensus of this Committee, it is much harder to deliberate. It will be much harder to write our statements. I have been struggling with this. I am willing to go along on this for a period of time because we are still not there yet, and a question is whether we can get to a consensus. So I am willing to hold off. But there will be a point at which some of us may say, "Gee, I can't sign on to that statement unless a consensus is built." I think that problem could become serious in the future.

So how do we deal with these issues? The reason that I'm comfortable with this step at this point is that through speeches we can clarify some of these issues. So, for example, if we go with this approach, I would give a speech and say that, although some information is here about inflation objectives, we should not think about it as having information about unemployment or output objectives because we have much uncertainty about what potential GDP or the NAIRU is and, furthermore, we can't control either. So I think that we can clarify some issues in speeches. I'm sure that the Chairman will do it.

The point that I think is relevant, and the reason I am discussing these issues, is that people have to realize that, even though this step is exactly the right way to proceed, it will still leave us with problems, and the reality is that we will have to deal with them. The advantage of proceeding this way is that it gives flexibility, particularly to the Chairman for dealing with the political considerations.

Eventually we will have to go to a numerical inflation goal. Not doing so will get more and more untenable over time. A question is, What is the right time to do it? What

is the right time in terms of the political environment? What is the right time in terms of where the economy is? So people have to be aware that this is really a first step. To be honest, I will not be satisfied with this as the end game. At the same time, the question is, When would be the appropriate time to move forward from here? We will have to use our best judgment on this question, and the Chairman will have to use his judgment as well. So I am very supportive of this proposal, but I want to make clear that I think that we're not settling the issues. I'm sure we will have to deal with them in the future, and I think we will deal with them in the future. So those are the general issues.

Let me go to some of the specifics. The issue about the horizon is really very tricky. I am very comfortable right now with a three-year horizon because things are working out pretty well. Thank goodness the economy has been coming out pretty much in line with our forecasts—that we actually have inflation coming down and that it is very close to what the goal of anybody on this Committee would be because we are all between 1½ and 2 percent. Given a goal of 1½ or 2 percent and a three-year horizon, we should get approximately there. So I do not think there's a problem now with a three-year horizon. However, I don't see this as stable because, God forbid, there could be cases when we get shocks and where we are substantially away from where we want to be, and then a three-year horizon will not be adequate. President Yellen and Vice Chairman Geithner made this point. The issue here is that doing three years now is fine, but we will have to rethink this in the future. At some point, we may have to go to a longer horizon, or the alternative will be that we will have objectives—so it is one or the other. I think people know where I stand on that issue—I have a preference. Right now, I'm actually very comfortable with three years because three years plus a long-run

inflation goal will provide the information that people need. If we don't have a long-run inflation goal, then at some point, if things don't go right, we may need a five-year horizon as well.

I get concerned about providing a federal funds rate path. I am known as a person who is very pro-transparency, but I wrote a paper called "Can Central Bank Transparency Go Too Far?" The problem here is exactly the one that Governor Warsh and others have mentioned. Even though we know that, when you put out a path, it is completely contingent on events and a lot of uncertainty is around it, making that clear to the public is very hard, particularly to politicians who want to use things in their own way. It's amazing, when you testify in the Congress, you'll say something, and then they will try to use whatever you say in a way exactly opposite to what you said. Everybody knows it is exactly opposite, but they will do it anyway. So you have to be very careful with what you put out there. This has been a problem with other central banks. The Swedes actually had problems when they first announced their path because they didn't clarify the uncertainty and some problems arose in the marketplace. We shouldn't rule it out in the future, but it is a tough thing to think about. For the time being, I would certainly not advocate it, and I have serious concerns about it.

On the issue of the CPI versus the PCE, a lot of details are here, and my view is to let the subcommittee decide. I'll go with whatever they want here. I do have a preference for the CPI, but it is very slight—I don't even think it's a second order issue, maybe third order; it's not really critical. An advantage is that CPI is better known. Vice Chairman Geithner mentioned it is actually involved in a lot of contracts. One reason that the CPI is used is that it is not revised. That turns out to be the reason that I lean to

the CPI rather than the PCE. I think the PCE is a slightly better measure, but the CPI is not revised, which will make our lives simpler because we know that we're making decisions ex-ante with the information we have now. However, when the PCE gets revised, people can second-guess you. We've had this in the past, when our PCE was getting very close to 1 percent. It turned out to be revised quite a bit upward, and then people said, "Gee, why weren't you tougher on inflation?" So I think that using the CPI has a political-economy advantage, even if there is a slight disadvantage from a technical viewpoint.

I share some people's concerns about the histograms. But I love to see the histograms. They were very useful to me. I like them because they provide information and actually show that there is less diversity. What was remarkable about them—and I don't think that this will be a problem in the future—is how close we generally are. I think that actually will help dissipate some of the issues in the press. But, again, I don't feel particularly strongly about this issue.

A very important issue that comes up here is where we put the enhanced projections into our documents and their relationship to how quickly we do the minutes. I lean toward having the projections as a separate document in some form, either as an addendum or whatever, because I think it gives us a lot of flexibility. I am going to say something that may get me an IED (improvised explosive device) in my office later on, but we'll talk about that in a second. [Laughter] There is also an issue about the times of the testimonies, which are happening two times a year. I suspect that we will end up with testimonies four times a year, and in that context it may be difficult to have the full minutes done within three weeks. We will definitely need to expedite the enhanced

projections. In fact, if we have the flexibility of having a separate document, we may be able to do one and then do the other; that way we can basically relieve some of the pressure on people. We're going to end up having to speed up the process on that part of the picture, so separating them to some extent has the advantage of giving us more flexibility.

So the last issue, for which I may get the IED in my office and which I think is going to happen even if I didn't propose it, is that I think there really is an advantage to having these enhanced projections as part of a Monetary Policy Report that is issued four times a year. My suspicion is that we will be in a situation when we do this that the Congress will likely want testimony more often. I am sorry for the Chairman here, but I would welcome the increased testimony because it gives us a bully pulpit from which to provide more information to the markets and to tell them our point of view. I wouldn't have to do the testimony, but there is a little work because, as a Board, we have to go over the testimony. I'm going on vacation, so we have to do a conference call about the testimony. I will have to do that four times a year, so there is a little cost for me but more for the Chairman. Having a Monetary Policy Report with these enhanced projections will actually be a plus. Again, it gives us an opportunity to express our views, and I suspect that it will actually end up improving the quality of the Monetary Policy Report. It could be an important part of our communication process.

Now, let me mention an issue so that I don't get the IED but instead just a water gun shot at me by the staff. We have a really serious problem right now in that our staff at the Board is getting severely overwhelmed by work. That is of great concern to me and, I think, to other members of the Board. The situation is such that, if we don't fix it, I

think the staff will break. This means that we have to think about the products that the staff produces for us. Do we absolutely need them? Even if we like them a bit, if they're very costly to produce, do we need them? This will be an issue going forward. The process that we are talking about now will increase work for the staff. If we do a Monetary Policy Report four times a year, it will be even worse. We may need to think about what goes on in terms of FOMC documents. Can they be done in a more efficient way? Do we need certain information? What is the most efficient way to run a research operation? The issue here also is that there has become a discrepancy in terms of the workload for the Board staff versus the research staff at the Banks. I think that it is great that the Banks actually have the research that is coming from them, which has greatly improved over time. That is a major positive for the System. But the discrepancy in terms of workload, which is killing our staff—if in fact their work is increasing relative to that of the Banks—is not a healthy situation for the System in the long run. So one of the things that I am proposing is more work in a sense, but the Committee will need to think about the issues of how we can use our staff more efficiently to continue to provide us with all the services we need, so that the quality of work does not decrease. If it's done right, it can improve the quality of work for us and can actually take some of the pressure off the staff. So I'm doing this so that I don't end being a victim of Jihadism, but I actually strongly believe it. Thank you very much, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you, Governor. Well, first of all, let me thank everyone for extremely thoughtful and helpful remarks. We will be looking at them, the staff will be looking at them, we will proceed with this process, and we will try to converge to the document that ultimately will be the one that will be the format that we

will be using. So we will be in touch with you about perhaps further questions, and we will be doing another trial run for the next meeting.

We do want to have a few thoughts from you on the statement. Let me propose the following. Let's take a half-hour break for lunch. When we come back—I've conferred with Governor Kohn about this—let me just ask you to answer two questions. One, in light of these proposed changes, are you happy with the statement, or is there a change that you would make? Two, are you happy with the approval governance—the process by which we now construct the statement? The answer could be yes-yes, no-no, [laughter]—clearly 3:00 p.m. is the drop-dead deadline—but I hope that we can have a very quick and efficient go-round on those two questions. So let's take a break for lunch now and come back in half an hour.

[Lunch break]

CHAIRMAN BERNANKE. Let us reconvene. Again, thank you for the very useful discussion before lunch. Let me just remind you that we need to keep this discussion within this room. It would be destructive to the whole process if we had it leak out in the next few months. So we appreciate your doing that.

The last item of business is just to do a go-round on the statement. Remember there are two questions. First, given where we seem to be going on using projections and the other elements we discussed, do you think that the statement is okay? What suggestions do you have for changing it? Second, do you have any comments on the consultative governance issues? Who would like to begin? President Hoenig.

MR. HOENIG. As far as the statement now goes, the way I would phrase it is that I can live with what we have. If I may anticipate President Minehan just a little bit, I would

like to see it simpler and shorter as we go forward, especially if we can move the minutes closer to the meeting date as we discussed here earlier. That would enable us to do that. That's my first comment. On the governance, I think the way we do it right now is fine. If we are going to have the statement as it is now structured, the process seems to be working, and I don't see any need, again, to vote on it.

MR. KOHN. Could I add to the governance question the issue of what we vote on as a Committee? Should we vote on the whole statement or just the first and fourth sections as we do now?

MR. HOENIG. Well, I guess the way I would answer that is I would not change the way we do it now because I'm not sure if it's the first or the fourth section. [Laughter]

CHAIRMAN BERNANKE. So the practical implication is that it really wouldn't be legitimate if we agree with that to dissent on the description of the economy or inflation.

MR. HOENIG. That's right.

CHAIRMAN BERNANKE. If we agree on that—but we will hear what people have to say. Thank you. President Stern.

MR. STERN. Thank you. I'm basically happy with the statement as it is now. It's not exactly where I thought I would come out, honestly. But if you look at it, it's really pretty straightforward and does what it needs to do—by which I mean that it provides a concise, but I would say valuable, rationale for the decision. That has to include, and it does, something that's forward looking a bit because obviously with the lags in policy we're not just making decisions based on looking in the rearview mirror. I don't think it's too long. It's only, if I counted this up right, seven sentences or something like that. That doesn't strike me as excessively long. In fact, other things being equal, I would probably be

in favor of adding to it rather than reducing it, but I don't think it's worth the effort based on my experience around this table in recent years. [Laughter] So I think it does what it should do and does it reasonably effectively. I have no inspirations, I guess, for how to improve it in any significant way. I do think it will continue to evolve just as the economy, the outlook for the economy, and the position of policy do. That's inevitable.

As far as governance is concerned, I would prefer voting on the entire statement, but I don't think that the current system is so badly broken that we absolutely, positively need to do something about it. But it seems as though we spend a fair amount of time on it, so I don't know why we wouldn't at the end of the day vote on it.

CHAIRMAN BERNANKE. Thank you. President Poole.

MR. POOLE. Thank you. I think the statement is okay. I am a little concerned that we modify it case by case. Today we had this issue about "elevated" or "somewhat elevated" and how would we change that without giving a message that we don't intend. I don't know whether we can craft language that would avoid that sort of case-by-case issue. It seems to me that after we go through the projections exercise, we might want to come back to that. On governance, I could go either way. I think it's okay the way it works because we fully discuss the issue. If there's sentiment to vote on the full thing, that's fine, too.

CHAIRMAN BERNANKE. Thank you. President Pinalto.

MS. PIANALTO. Thank you. I'm basically happy with the statement the way it is now. Like President Stern, I was leaning on the side of making it shorter, but when I started to look at where I would cut, it was very hard to come up with places to cut. I don't think that adopting some of the changes that you outlined earlier will shorten the statement. It

could change how we characterize elements of the statement, especially the rationale section. When we talk about economic growth, we can characterize it more as it relates to the central tendency projections that we've provided. Then when we characterize inflation, rather than using words like "remains elevated" or "will moderate further," the public will have the benefit of our projections on a quarterly basis, and it might be easier then to describe how we view the inflation situation. Then also by adopting a total measure for inflation, it will be easier and, again, clearer when we're saying words like "inflation" or "inflationary pressures." The public will better understand what measure we're looking at. So I don't think that the new approach or the revised approach would change the length, but it might help us in the communication process, and I'm happy with the way that we're doing the risk assessment in the statement now.

In terms of governance, I think that the public views the statement as a product of the Committee deliberations, and for that reason I think having the Committee vote on the full statement would be helpful. In that regard, Vice Chairman Geithner made a comment earlier about if we go that approach, let's make fewer changes at the table and focus on giving our input to the statement before the meeting. If we do some of the editing at the table, we don't have time to reflect on how those changes will be interpreted. So having fewer changes at the table would be helpful. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. I like the statement as is. I was one of those who, when we considered accelerating the release of the minutes, thought that it would take some weight off crafting the statement, which we could shorten. Alas, I was incorrect, and that was sort of hopeless. So I'm giving up. I sort of like the length the statement is now. It does a

reasonable job with what it does, with one exception—the last section, the so-called balance-of-risk assessment. I've argued this many times when we've talked about this. The intention is to convey the likely next direction of interest rate changes. Our general practice has been—there have been some exceptions—to describe the risks to the things we care about, and we invite people to deduce what we think of as the likely next direction of interest rate moves by inverting our policy reaction function somehow. I always thought that was problematic, needlessly obscure, and I liked the times when we crafted that statement fairly directly and explicitly with phrases like “policy firming.”

About the balance-of-risk assessments, I hesitate to put something else on the table, but we ought to think about the directive, too, because the balance-of-risk assessment came into the statement because it was in the directive and there was a tilt statement in the directive that originated in the '80s as a way of providing the Committee's sense of constraint on the Chairman's discretion to make intermeeting moves. That's my understanding of how it arose. Then it came to be about the next meeting when we did intermeeting moves, and now it's just sitting there in the directive, and I don't know what good it does in the directive really. You know, we don't make intermeeting moves. I don't know what our understanding is about discretion about intermeeting moves. I think that we're supposed to have a conference call with everybody. So I don't know why we need this little directive in there, and it seems to me you could just take it out of the directive.

About governance, I'm in favor of voting on the whole thing. I remember talking at one point with I think it was you, Mr. Chairman, and others about how it is backward for us to talk about the statement—to do negotiations about the statement—a week before we even talk to each other or read the Greenbook. But I don't think that's so problematic. It doesn't

end up putting our feet in cement really, and I think we've been able to have sufficient flexibility during the meeting despite what we said the week before. So I don't view that as terribly problematic.

CHAIRMAN BERNANKE. President Moskow.

MR. MOSKOW. Regarding the first question, the statement, I think the process is working well at this point, and so I don't see any need for major changes in it. Given the consensus on moving forward on these projections, I think that fits in quite well with the existing process we have for the statement. My feeling is to minimize forward-looking comments in the statement. We never used to do this, and then we got into it with phrases like "considerable period," and "patience," and so forth, and then we evolved to a statement in which we say "future policy adjustments depend on the evolution of the outlook for inflation" and so forth, and the data coming in. So we don't really have a forward-looking statement currently, but my preference is to use forward-looking statements only when it really is important to serve a specific purpose for the Committee. I tend to agree with Jeff Lacker that you could drop the last part of the statement.

On the governance issue, it seems artificial not to vote on the entire statement because we spend so much time talking about all parts of it. So on balance I would say, yes, we should vote on the entire statement. One issue was raised in the background material about whether the statement should be the Chairman's or the Committee's. I think it should be the Committee's. It would put the Chairman in an awkward position not to have it as a statement of the Committee. If it wasn't a statement of the Committee, people would try to pull us apart by asking us questions individually as to whether we agree with "the

Chairman's statement." So I think the process we have now is just right and that it should be a Committee statement.

CHAIRMAN BERNANKE. Just to clarify your comment on forward-looking language, your examples were about policy, like "considerable period" or whatever, but not necessarily. Does your comment apply to statements like "output is going to grow at a moderate pace?"

MR. MOSKOW. No, I should have clarified that. No, in terms of comments in the statement about the outlook for the economy, yes, I think that's fine. I was thinking of the outlook for policy.

MR. KOHN. I also had a two-hander on that. So in terms of things like "predominant concern," which is kind of forward looking for what our concern is in the future, would you have that or would you cut out the whole fourth section?

MR. MOSKOW. No, when appropriate, I would keep that. But I was thinking primarily of the last sentence that we had happen there. My recollection is that it evolved from "a considerable period" to "patience" and so forth, and then we got into "it will depend on the outlook for inflation and economic growth."

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. I'm not sure I heard you clearly, Mike, but I want to clarify: I was advocating eliminating the risk assessment from the directive, but I would keep that section in the statement.

CHAIRMAN BERNANKE. President Yellen.

MS. YELLEN. Well, thank you, Mr. Chairman. I think the statement is just about right. I like the current length and structure. I would not want to see a great deal more detail

in it about our assessment of the economy. I think that should wait for the minutes, but I don't think there's anything that's in the statement now that we should cut. The statement has evolved; and we have in practice avoided doing something formulaic in terms of the balance of risks. We do not have the same language all the time. We sometimes use forward-looking policy language and sometimes we don't. That's good. I think we should avoid anything formulaic and just do what's appropriate in the given conditions. When we were on a path of raising the fed funds rate from 1 percent, and we had every expectation that we would be involved in a series of steps over time, it would have been highly artificial to avoid indicating in the statement that this was our expectation. It was important to signal it using forward-looking language. So I wouldn't want to take forward-looking language off the table. It doesn't seem too important now when our own expectation is for a flat path. So I think the statement is working well. I'm really amazed at how well the process of drafting the statement is working too.

MR. MISHKIN. Well, considering the group. [Laughter]

MS. YELLEN. Initially when we started getting into circulating ideas about it before the meeting, I thought, "Oh, this is going to be chaotic and spin out of control." I've been amazed at how thoroughly constructive it has been—that by the time we walk in here and have the statement, it has actually evolved a fair amount. I think it has always been an improvement, and we have been able to have drafting sessions, and they have worked out surprisingly well.

On the governance, I think this thing has accidentally fallen into a governance hole, and it needs to be cleaned up. The Committee should vote on the whole statement. That's what the outside world thinks now; they just haven't noticed that we don't.

CHAIRMAN BERNANKE. President Minehan.

MS. MINEHAN. Thank you very much. I'm relatively happy with the statement. Along the lines that Presidents Yellen and Moskow discussed, I would try to stay away as much as possible from forward-looking language or commitments. There's a time and a place—2003 going forward: Moving from 1 percent up was a unique occurrence, I think. So I would really focus the statement, as we mostly do now, on what we did and why we did it. Why we did it has a forward-looking component to it. It has to depend on what we expect the economy to look like in the future and where we expect inflation to go. Something referencing both of those things has to be in there. If I had my druthers, I'd be agnostic about whether or not we do an assessment of risk each and every time; rather, consider what that adds to or possibly subtracts from in terms of the statement. So I wouldn't be committed to doing a section 4 each and every time. It's really good, to the extent we can do it, to stay away from formulaic language and to focus the statement as much as we can on what the realities are at the time of what we did and why we did it.

In terms of process, with anything edited by nineteen people, the process is not always optimal. Getting a little sense of where the staff is the week before is helpful. It has allowed people, myself included, from time to time to weigh in, to actually be heard before the meeting and to make some changes to the draft statement that we look at in the meeting. I can understand the desire not to do too much editing around the table. However, I thought that one of the reasons that we went to more two-day meetings was so we could all get a read on what others were saying and thinking on the one day, think about it and any implications it had for what we said and how we said it overnight, and then bring those thoughts to the table the next day. I always thought that there was a lot of logic to the

process and that it probably adds to rather than subtracts from the amount of comments around the table, particularly when you find yourselves in a bit of a tenuous or dicey situation with regard to how to characterize how people are feeling about things. So I think I'd be willing to bear a little more noise around the table rather than a little less.

On the governance issues, I think this started as the Chairman's statement because nobody had the stomach for nineteen people editing. So it was better to let it be the Chairman's statement, and therefore we didn't have the right to edit it. Now, of course, we edit it, so it doesn't seem reasonable to me not to vote on the entire statement. I think it's easy enough to make that change. The whole thing is so esoteric anyway that I can't imagine that anybody aside from us knows that we don't vote on it or has even focused on it. The idea that people are going to dissent on the statement? We're not dissenting on policy. I find it difficult to think that dissenting on the statement is going to be a big issue, but it is always possible, I suppose. Were there any other governance issues? I think I probably said this. The current approval process is difficult; but given the ability to look at some form of a draft the week before, to be able to think overnight, and provide some substance to the editing process the next day, I think it works okay.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, I think the statement should be a statement of the Committee. I don't have any problem with the current governance structure, although I think it does make sense for everybody to vote on it since we hammer it out anyway. I wouldn't change the language. We do have one sentence that we always repeat, which to me is a given—that our future policy actions will depend on the evolution of the outlook, et cetera, et cetera. I guess we should say that every time, but I'm not sure we have to say that

every time. It's a given. Otherwise, I'd keep it the same, although I promise to continue to lobby for the word "global" from here to infinity. [Laughter] Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. Like the others, I think the statement has basically evolved into a very good place. I sometimes worry that the process of putting a statement together by nineteen people will mean that there's too much inertia in the process. But so far, maybe because the economy hasn't jerked around very much recently, we've been able to keep up. But I do think we need to make sure that the language doesn't lag the events or, if events start to move, we've got to be willing to change the language even though it's hard here. I like the way the balance-of-risk section has evolved from talking about what's going to happen to the funds rate—I agree with President Yellen that it was appropriate in the particular circumstances—to talking about the right-hand side of the Taylor rule—that is, what's going to happen to the output or inflation gaps. So I think that's positive. It gives a little very vague guidance about what the Committee is most worried about, and I think that's probably helpful to the markets. That is then elaborated in the minutes, but it fills a three-week gap before the minutes come out. Certainly if we changed our minds about where we saw the risks to the economy, we would probably want to tell people about that before those minutes come out. So basically you're in a pretty good place here, and it will continue to evolve. We just have to allow it to continue to evolve.

On the governance side, I think the editing is also going pretty well. When we got into the pre-meeting editing, I was a little concerned that the decisions were going to move outside the room. But the process has evolved in a way that we get close to what the final statement is in these pre-meeting sessions, and then we can fine-tune the language at the

meeting. That's probably where we need to be if we're going to put out a statement. So I'm comfortable with where we are there. I think that most people outside this room think that the Committee is responsible for the whole statement, and we probably ought to acknowledge that by making the Committee responsible for the whole statement. But if we do that, we ought to understand among ourselves that the hurdle for dissenting on words should be very, very high or else we will get ourselves into a governance mess. Those are my thoughts.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. I like the statement format and process and, like Governor Kohn, think that the governance, while it is not urgent to change, will catch up with the reality and with the expectation. Thank you.

CHAIRMAN BERNANKE. Governor Kroszner.

MR. KROSZNER. Thanks. Much as Gary Stern has said, as an academic I was never particularly enamored of the statement. But actually having seen how it evolves, how it is built—usually when you see the way the sausage is made, that upsets your stomach, but it has actually been the opposite. [Laughter] Maybe I have been eating the sausage for too long now. I don't know. [Laughter] I've been taken in by it. But I think, as Governor Kohn has said, it has evolved in a way that many of the elements that I was more critical of a few years ago are not there now. I think it operates in a perfectly reasonable way.

Some people have mentioned how the statement could change if we speed up the minutes. We're never going to speed up the minutes beyond say a week. Even if we were to get it to a week, which I don't think is feasible, the statement can't change all that much. We have to convey the information that's in the statement. I don't think we can say, "Well,

gee, because next week we're going to say something, we can just cut it down to two sentences or three sentences." As long as there's a week in between, and I can't imagine there being any less than a week in between, the statement is going to have the kind of information that it has in it, which I think has evolved in a perfectly reasonable way.

On governance, since the process is working, I don't really see the need to change it. There's a possibility that down the line that concurring opinions could be put out so that people agree to whatever the monetary policy movement is but, like the Supreme Court, write their own statement. Since the process seems to be working well without leaving that possibility for coming in, I don't see that it's necessary to make the change, although I'm open on that. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Governor Mishkin.

MR. MISHKIN. In terms of this issue of forward-looking language, I'm quite comfortable with the statement and with forward-looking language so long as it's on the right-hand side of the Taylor rule in terms of what's going on with output and inflation. I'm actually not a fan of forward-looking language in terms of the federal funds rate, and in fact, I differ from some people on this. I really didn't like it, even during the unusual period when there was some concern about deflation—in that context, it did have elements that people might have interpreted as a commitment. It turned out that nothing bad happened because the economy evolved in a reasonable way, but I can think of scenarios during that period, particularly in 2004 and so forth, when it might have been a real problem. So you do have the statement at the end that we're always contingent on events. I like that statement; but what I don't want to see is moving from that to what we did in that period, except in the most unusual circumstances. At the beginning it was justifiable in terms of concerns about

deflation, but it actually had real potential problems that did not arise, but I think we got lucky. So I'm very comfortable with where we are right now. I think the editing process is going well in terms of the meeting—there is fine-tuning going on, but it's done in a very constructive way, and I think it's working well.

In terms of governance, I guess I lean toward the idea that we should vote on it, for the following reason. When you think about doing policy, it's not just what you do today that's important. What you are signaling about the future is every bit as important. This is the whole issue that the Chairman has worked with Mike Woodford on—the issue of managing expectations is not just what you do with the federal funds rate now; it's also the path. In fact, the projections that we are talking about doing are very much consistent with that way of thinking. So the reality is that, from a policy viewpoint, what we say in the statement is as important as what we do in voting on the federal funds rate. Indeed, since I've been on the Board, that's been really the only issue because we really haven't had much debate about the federal funds rate decision. So in that sense, if it is really important and it is a key part of policy, it makes sense for us to vote on it. I'm not worried about the issue of dissents because the point that you made, Governor Kohn, that there should be a very high barrier is exactly the way people have been proceeding. The barrier is fairly high for the federal funds rate decision, but in this case even more so. It's just a couple of words, and if you dissent, well, to be honest, then you're a jerk. [Laughter] I don't see any jerks here. So my feeling is that I don't think we're going to have a big problem.

MR. STERN. Not anymore. [Laughter]

MR. MISHKIN. So I'm actually quite comfortable with moving in that direction. Thank you very much.

MR. KOHN. We have to put those words in the minutes so that they get out there sooner than five years. [Laughter]

MR. MISHKIN. I'll be an outlier in terms of the transcripts five years from now; they'll say, "Oh, God, Rick is here."

CHAIRMAN BERNANKE. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. It may horrify everyone at the table that before I joined the Committee, I didn't actually parse this statement every few weeks. [Laughter] I don't have a lot of historical perspective, but I'm basically okay with the way the process works now. I think that the inclusions in the statement all serve a purpose. I'm not sure I fully understand the right and the left side of the Taylor rule, Rick, but maybe afterward you can explain that to me. I view this statement as having a short term. If there are forward-looking statements, they are short term. They signal the next meeting or two, but not much more than that. Regarding the governance or the voting issues, I think we should vote on the whole thing, and if we ever need to have a tie breaker, I guess I would revert to its being at that time the Chairman's statement. But in normal circumstances, we all vote and agree, and that's it.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. I, too, am relatively new to this process of watching the sausage being made. I have to confess up front that I'm a bit schizophrenic about this because I'm really of two minds in terms of the direction I think about, and I'm persuadable either way. Part of me, as Jeff said, has argued that maybe the forecasting exercise is going to take some pressure off all the nuances and the time we spend on the statement. As Governor Kroszner mentioned, no matter how soon we get the minutes

out, it's going to be tough to do that. So I'm sympathetic to that argument. My view is that the minutes really provide the nuance of what goes on in the Committee, and I think that's incredibly important. The only thing I worry about in terms of the statement is that it can't provide that nuance and it gets so much attention in the marketplace so immediately so that part of me says either we want to enrich the statement and get rid of some of the inertia that's in it, and make it longer or just make it shorter. So a part of me says that maybe what we really ought to say in the statement is just section 1 and section 4 and let the nuance of how we got there and what our views are be elaborated in the minutes. So a part of me says that it would be a simplification that tells the markets what we did and how we view the assessment of risk as we look at the economy, but it doesn't try to tell them all of the details of what went on. We let the minutes do that. I can live with the statement with way it is, but I think there might be some advantages in simplifying it so that we don't spend so much time arguing over the nuances of the rationales and other things. Besides that, we'd get capacity utilization out of there if possible and just go with the overall assessment of the risk, and then let the minutes speak for themselves in terms of the nuances of the discussion.

On the governance question, I agree with everybody else. I think that it has been implicitly a statement of the Committee. The Committee ought to vote on it. If you took sections 2 and 3 out, there would be a lot less wordsmithing and a lot less worrying about whether the words were exactly right and what each of us might have meant or preferred to say. So it might even make it easier to have a Committee vote on that, and they'd have to worry about fewer things. Those are just some thoughts.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN GEITHNER. Thank you, Mr. Chairman. I think the statement has been evolving sensibly. The process is basically working. I don't think we need to lock ourselves into any fixed view of the optimal structure of the statement over time. We should be open to changing it if it suits our purposes in specific circumstances. Obviously, shaping expectations about the stance of monetary policy is a vital part of what we do. I'm pragmatic on all the questions about whether or not to have forward-looking language. There are some circumstances in which it may make sense in the future as it has in the past. Those should be exceptional circumstances, and using it should be done very carefully and thoughtfully. But we do not need to commit not to use it. I also think the basic structure of saying something implicitly about the forecast, the outlook on which our decision is based, is very important. So we should have something in there that refers to the expected path of output and inflation and the risks to that generally as part of the signal. Without that, you'd lose a lot of value. I think I'd still be open to experimenting further as we have been doing with introducing a bit more forward-looking view about the outlook for demand and inflation as part of the statement, even though that will be hard to do well.

On governance, I have a very different view. I think that we really should stay in this governance limbo that we now have. It's very important to recognize that we've had a huge amount of turnover in this Committee. It's important to give the Chairman the flexibility to ultimately be the arbiter of the nuance in the statement without having to go through a process in which he will have to figure out whether he's prepared to have a vote with significant dissent in that context. Right now we have a process in which the Committee has substantial input into the shape of the signal that's in the statement. The minutes actually say that the Committee agreed that the statement should say X. It's clear

that the Committee is implicated in the statement. The Chairman is obviously very deferential to the views of the Committee in shaping it, but we're close to 80 percent of the way in having a formal endorsement by the Committee of the statement. I don't see any virtue in going the next 20 percent and a lot of virtue in preserving the possibility for the Chairman to say, "My sense is that we should do X," (I know that's not acceptable to all of you) and not have that come with something that forces a vote in that context. I just don't think the balance we have now is problematic, but I can envision a circumstance in which the state of the world, the state of the Committee, or a bunch of other things might make a formal vote unnecessary and tilt the balance in a way that may not make sense for the institutional structure we have. You know, we have a group of nineteen, not of seven. Fundamentally the Fed model institutionally is based on a strong Chairman, and I'd preserve that particular remaining piece of that model.

CHAIRMAN BERNANKE. Thank you. Are there any other comments? Well, again, we'll review the transcript and see what steps we need to take. Once again, thank you for your very useful comments. The next meeting is Tuesday, August 7. If there is no other business, then we're adjourned.

END OF MEETING