

**Meeting of the Federal Open Market Committee  
October 24-25, 2006**

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., starting at 2:00 p.m. on Tuesday, October 24, 2006, and continuing at 9:00 a.m. on Wednesday, October 25, 2006. Those present were the following:

Mr. Bernanke, Chairman  
Mr. Geithner, Vice Chairman  
Ms. Bies  
Mr. Kohn  
Mr. Kroszner  
Mr. Lacker  
Mr. Mishkin  
Ms. Pianalto  
Mr. Warsh  
Ms. Yellen

Mr. Hoenig, Ms. Minehan, Messrs. Moskow and Poole, Alternate Members of the Federal Open Market Committee

Messrs. Fisher, Plosser, and Stern, Presidents of the Federal Reserve Banks of Dallas, Philadelphia, and Minneapolis, respectively

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

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

Messrs. Connors, Eisenbeis, Judd, Kamin, Madigan, Sniderman, Struckmeyer, and Wilcox, Associate Economists

Mr. Kos, Manager, System Open Market Account

Messrs. English and Slifman, Associate Directors, Divisions of Monetary Affairs and Research and Statistics, respectively, Board of Governors

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

Messrs. Dale and Oliner, Senior Advisers, Divisions of Monetary Affairs and Research and Statistics, respectively, Board of Governors

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

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

Ms. Weinbach, Senior Economist, Division of Monetary Affairs, Board of Governors

Messrs. Kumasaka<sup>1</sup> and Luecke,<sup>2</sup> Senior Financial Analysts, Division of Monetary Affairs, Board of Governors

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

Messrs. Fuhrer and Rosenblum, Executive Vice Presidents, Federal Reserve Banks of Boston and Dallas, respectively

Mr. Evans, Ms. Mester, Messrs. Rasche and Sellon, Senior Vice Presidents, Federal Reserve Banks of Chicago, Philadelphia, St. Louis, and Kansas City, respectively

Ms. Mucciolo and Mr. Todd, Vice Presidents, Federal Reserve Banks of New York and Minneapolis, respectively

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

Mr. Hetzel, Senior Economist, Federal Reserve Bank of Richmond

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<sup>1</sup> Attended Tuesday's session only.

<sup>2</sup> Attended Wednesday's session only.

**Transcript of the Federal Open Market Committee Meeting on  
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**October 24, 2006—Afternoon Session**

CHAIRMAN BERNANKE. Good afternoon. Let me start by welcoming Pat Barron, First Vice President of the Federal Reserve Bank of Atlanta, who will be here in Jack Guynn's seat for today.

MR. BARRON. Thanks. It's good to be here.

CHAIRMAN BERNANKE. Welcome. I have a bit of business to start with before we go to Dino. Last month the Congress passed, and the President signed, the Financial Services Regulatory Relief Act, which had a number of measures in it. Included among them were provisions that allow the Federal Reserve to pay interest on reserves and to reduce reserve requirements at our discretion. The act potentially has a lot of very important implications for the conduct of monetary policy, for payment systems, for contractual clearing balances, for data collection, and so on. Because of budget-scoring rules, the provisions of this act will not take place until October 2011. So I feel that, if we hurry, we can possibly be prepared in time. [Laughter] So if the group is amenable, I'd like to ask Vincent Reinhart to form a committee of senior staff around the System to begin talking about these issues. I assume at various intervals we'll have reports and some discussions at the FOMC meeting about these issues. Do I hear any second?

VICE CHAIRMAN GEITHNER. Second.

CHAIRMAN BERNANKE. Thank you. Dino Kos.

MR. KOS.<sup>1</sup> Thank you, Mr. Chairman. I will be referring to the charts that were distributed, and I will divide my comments into two parts. First, a slimmed-down report on market developments in the intermeeting period, and then I'll touch on the

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

highlights of the memo I circulated last week regarding management of the System Open Market Account.

The short intermeeting period was relatively calm. Hence, volatility remains low and credit spreads tight, while some equity indexes rose to multiyear highs. Occasional rumors that a large hedge fund lost significant amounts of money betting that yields would rise did not dent the underlying sense of confidence or relative tranquility. On the first page of the handout, the top panel graphs the three-month deposit rate and the same rate three, nine, and fifteen months forward. The longer-dated forwards—as reflected by the solid red line—have declined more than 75 basis points from early summer to early October as market participants priced in an easing of policy for early 2007. Those expectations were heightened as GDP forecasts for the third quarter were consistently trimmed downward. But having pushed forward rates too far, market participants were poorly positioned for the reversal in past few weeks after a surprising Philadelphia Fed survey and comments by Governor Kohn and other Committee members were interpreted as suggesting that policy would not likely be eased on the trajectory that markets had built in. Longer-dated forward rates still anticipate an ease late next year, but the magnitude of that easing has been scaled back. Longer-term Treasury yields show a similar pattern, as indicated in the middle panel. The yield curve remains inverted, though less than it was a month ago. With credit spreads remaining tight and credit quality favorable, there has been less agitation in markets that the inverted curve is sending a recessionary signal. Meanwhile, breakeven inflation rates from TIPS paint a favorable picture, especially at short maturities given the fall in energy prices. As shown in the bottom panel, the five-year breakeven continued to narrow, to about 2.10 percent, and has now contracted more than 50 basis points in less than three months. Longer-term maturities, which are less affected by short-run energy price moves, had less of a decline, as shown by the ten-year maturity. Meanwhile the five-year rate five years forward—the red line—is little changed from the last FOMC meeting.

The prospect that policy rates may have peaked plus falling oil prices supported equity prices and trumped adverse factors such as evidence that economic growth had slowed. As shown in the top left panel on page 2, the Dow Jones Industrial Average finally pierced the 12,000 level to a new record high. Other major indexes, such as the S&P 500 and the Nasdaq—as shown in the top right panel—also rose, though they remain some distance from their record highs. One feature of the equity markets since the tightening cycle began has been the outperformance of so-called value stocks, as shown in the middle left panel. When economic growth is strong, value stocks—represented by the larger cyclical companies—tend to do better because their earnings are stimulated by the strong economy. But since early August, coincident with the pause in policy tightening, the growth stocks have begun to outperform. One interpretation is that, with economic growth slowing, the effect is biggest on cyclical companies, whose margins compress, whereas growth stocks are better able to maintain margins. Another interpretation is that the equity markets are also pricing in

a peak in the tightening cycle on the theory that the Committee will not tighten into a slowing economy.

Finally, this generally benign picture is also reflected in the foreign exchange market. The bottom panel graphs the dollar against a range of currencies since the last FOMC meeting. None of these currencies moved more than 2 percent in either direction, and most are clustered within a band of 1 percent. For what it's worth, the currencies that appreciated tended to be higher-yielding currencies. This pattern tends to support anecdotal reports that, in the absence of directional opportunities, carry trades continue to attract speculative flows.

Switching gears somewhat, I want to summarize the main points of the memo that I sent to the Committee last week about the domestic portfolio guidelines. The last time that we systematically looked at the portfolio was in 1996. We looked at it again in 2000 and 2001 in the context of considering alternative assets given that the Treasury market was shrinking and the Committee was faced with the prospect of acquiring private-sector assets. The table on the right side of page 3 provides a recent snapshot of the System Open Market Account. Given the amount of time that has elapsed and the changed environment, we thought it would be timely to refresh our analysis and assess whether the principles we had been using to manage the SOMA portfolio still made sense. Indeed, we concluded that the four principles identified previously—safety, liquidity, market neutrality, and return—remain appropriate given the objectives for SOMA.

Safety is the bedrock of a central bank balance sheet, and its importance is uncontroversial. The Committee has achieved the goals embedded in this principle by maintaining a portfolio of Treasury securities with no credit risk. For years SOMA also held smaller amounts of agency and GSE (government-sponsored enterprise) securities, but these were allowed to roll off. The last GSE security in SOMA matured in 2003.

Somewhat more complicated is liquidity. The Committee has discussed liquidity at various times in the past two decades. In practical terms, the issue is how fast the Desk can offset a reserve-adding event, such as a large discount window loan or a large foreign exchange intervention. Our view is that the critical period for such operations is the short run. Longer-term sterilizations will likely be slow and can be managed in the normal course of reserve management operations. As the memo describes—so I will not go into detail—our conclusion is that it is prudent to add a second limit or guideline of \$80 billion of liquid assets over a three-month period while keeping the current \$208 billion limit over a twelve-month period. In practice, as shown in the bottom chart on page 3, SOMA maintains liquidity from maturing bills, coupons, and repos far beyond these minimums—a feature we will continue. Additionally, the Desk has other tools if needed *in extremis*, as shown on the left side. These include the ability to conduct reverse repos and, as a last resort, outright sales.

The third principle is market neutrality, if you would turn to the next page. This is also somewhat complicated. This issue is, in many ways, simpler now than it was six years ago, when the stock of Treasuries was declining. At that time, we adopted a per issue limit structure, which is summarized in the top right panel of page 4. In short, per issue limits of 35 percent were adopted for bills, which gradually declined to 15 percent for bonds. The blue bars represent SOMA's holdings for each specific security. This response was reasonable given the environment in 2000. However, the limit structure has, in recent years, created situations in which we have had forced redemptions to stay within these limits, which in turn forces us to make additional outright purchases to offset those maturing assets. We are therefore proposing to revert to an informal flat limit structure of 35 percent for all maturities. I should note that this change would, in reality, have a very limited effect on the portfolio given other restrictions that we have, and which I'll get to later. At the margin it might allow us to reduce our huge reliance on holdings at the short end of the curve. We are somewhat underrepresented in the middle of the curve.

An associated issue I wanted to raise is SOMA's auction participation. Our participation can be highly variable. There are two factors that we cannot control. First, the Treasury's auction calendar is itself variable and dependent on fiscal needs. Second, the Desk cannot participate in auctions unless it has securities maturing that very day. The middle right panel shows this variability. The yellow box highlights SOMA's anticipated participation for the three-year note in the next three refundings. We anticipate taking down \$6.1 billion in November, \$1.5 billion in February, and then \$6.0 billion in May. Why is this important given that we are an add-on in the auctions? The Fed's holdings are part of the floating supply, which can influence the way an issue trades in the repo market. This can, I hope, be seen in the bottom panel. Our participation in the five-year note went from quarterly participation to monthly when the Treasury shifted from a mid-month settlement to a month-end settlement. SOMA's participation is the green bar. The change allowed us to smooth out our participation because we had large amounts of two-year notes maturing at month end. The black line represents the specialness spread in the repo market for each issue. Note that this spread has been much smaller in recent months, when SOMA's holdings have been both steady and available to be lent. Our preference for steady and consistent auction participation is, however, constrained by restrictions on how we invest maturing proceeds and, of course, by changes the Treasury makes to the auction calendar. In short, we are likely to continue to wrestle with this principle for some time.

The last principle very briefly is return. In our view, this principle should not drive the way SOMA is managed, given that our profits are derived from interest on our Treasury holdings and in turn flow back to the Treasury.

Mr. Chairman, there were no foreign operations during this period, and I will need a vote to approve domestic operations. Helen and I would be happy to answer any questions.

CHAIRMAN BERNANKE. Are there questions? I see none. Do I have a motion?

GOVERNOR KOHN. So moved.

VICE CHAIRMAN GEITHNER. Second.

CHAIRMAN BERNANKE. The motion is passed without objection. Thank you very much. We'll turn now to the economic situation. Dave Stockton.

MR. STOCKTON. Thank you, Mr. Chairman. About a week ago, as we were closing the forecast, I was marveling at how little it had changed over the intermeeting period—both the broad strokes and the details. But the warm glow of accomplishment had barely been kindled when a glance at my desk calendar revealed the source of our success. The last FOMC meeting had been only five weeks ago, so we simply had not had time to accumulate our usual backlog of forecasting errors. [Laughter]

I recognize that even this assertion is open to some challenge. Because of the incoming data, we have revised down our estimate of third-quarter growth of real GDP about  $\frac{3}{4}$  percentage point, to an annual pace of just 1 percent. However, we don't think this downward revision carries with it much, if any, macroeconomic signal about greater weakness going forward. Importantly, consumption, housing, and business fixed investment all came in very close to our September forecast. The downside surprises that we experienced last quarter were concentrated in motor vehicle production, defense spending, and net exports. In each case, we believe some good reasons exist for anticipating that these sources of restraint will abate or reverse in the fourth quarter. With regard to motor vehicles, the production cuts needed to deal with the inventory overhang that developed last spring have been larger and have come more quickly than we had expected. As a consequence, the drop in motor vehicle output took a bigger bite out of growth in the third quarter and is now expected to be a roughly neutral factor for growth in the current quarter, rather than being a small drag on growth in both quarters. Defense spending also fell far short of our expectations last quarter, but we expect these outlays to rebound in the fourth quarter to a level more in line with defense appropriations. Finally, imports are estimated to have surged in the third quarter more than seems warranted by the fundamentals and, as best we can tell, without a full offset in other components of spending. Karen and her team expect some of that import surprise to be unwound in the fourth quarter, providing a small plus to estimated growth. All told, we are projecting the growth of real GDP to rebound to a pace of  $2\frac{1}{4}$  percent in the fourth quarter. For the second half, output is anticipated to grow at an annual rate of  $1\frac{1}{2}$  percent, a forecast not much different from the one in September.

We also have made only minor adjustments to our longer-term GDP forecast. By our assessment, lower oil prices and a stronger stock market more than offset the effects of a slightly higher dollar and a bit weaker trajectory for house prices. All

told, we revised up our forecast for the growth of real GDP 0.1 percent in both 2007 and 2008, to 2.2 and 2.5 percent respectively. Basically, the general contour of the forecast is the same as in September. As before, the very subdued pace of the expansion that is projected for the second half of this year results principally from a sharp contraction in residential investment that directly subtracts more than 1¼ percentage points from the growth of real GDP. Residential investment continues to contract next year, though that contraction gradually diminishes. In addition, the drag on spending and activity from the run-up in energy prices that has occurred, on net, over the past three years is expected to lessen considerably from this year to the next. The attenuation of the drags from housing and energy alone would result in a prompter return of growth to potential. However, we expect the housing slump to restrain the growth of real output this year and next through wealth effects and multiplier-accelerator influences. Most notably, house prices are projected to about flatten out; and as the impetus from past house appreciation wanes, consumption growth should slow, and the saving rate should begin to edge up. With its usual lag, the overall deceleration in output, income, and sales further damps consumption and business investment. As a consequence, growth remains slightly below potential in 2007, and the output gap edges up to roughly ½ percent of GDP by the end of the year. With the bulk of the direct and indirect effects of the housing slump expected to have largely played out by then, real GDP growth is expected to expand in line with its potential in 2008. Meanwhile, core PCE price inflation, which is currently running a bit less than 2½ percent, edges down to about 2 percent in 2008. The opening up of a small output gap helps to head off an intensification of inflation pressures. But by far the most potent influences are the diminishing upward pressures from prices for energy, non-energy imports, and other commodities.

Because this basic story is virtually unchanged from the September Greenbook and because we had relatively few surprises to deal with in the forecast, I thought that I would dispense with a further explication of the contours of the forecast. Instead, I'll offer you a scorecard of sorts to help you audit the plausibility of the forecast story in light of data that we will be receiving in coming months.

Let me start with housing, because as I noted a moment ago, the recent and projected contraction in residential investment is the principal source of the below-trend growth that we are projecting over the next year. For that story to be on track, housing starts will need to drop sharply further by the end of the year. Single-family starts averaged about 1.4 million units in the third quarter, and in our forecast, we are anticipating a further 12 percent decline, to a pace of 1¼ million units this quarter. We read the incoming data as being consistent with that outlook. Although starts bounced up in September, permits—a less noisy indicator of housing activity—continued to plunge. Moreover, inventories of unsold homes remain at a very high level, and sales cancellations have continued to increase. But after a long period of what seemed to be unrelentingly bad news, the housing data received over the intermeeting period could be fairly characterized as more mixed. Sales of new and existing homes firmed a bit in late summer, the index of pending home sales moved up in August, and homebuying attitudes as measured in the Michigan survey



jumped up in September and October. Although it is far too early to conclude that these indicators are pointing to stabilization in housing markets, they provide at least some encouragement to the view that the bottom may now be closer than the top. We will also be scrutinizing the information on house prices. Another reading on the OFHEO (Office of Federal Housing Enterprise Oversight) price index will become available in early December before the next meeting. Here we will be looking for another noticeable step-down in the rate of house-price appreciation, from the 5 percent pace posted in the second quarter to a projected  $1\frac{3}{4}$  percent pace in the third. That forecast is roughly consistent with our near-term forecasting models that make use of the information in the Case-Shiller price indexes and other high-frequency measures of home prices. As you know, we are not forecasting the national average of house prices to drop, but our very low projected rate of house-price appreciation implies that a substantial fraction of households will be experiencing outright declines.

Consumption will be the second major area that should be monitored, in part because we are expecting the slowing in house prices to show through here. In brief, we will be looking for a continuation in coming months of the moderate increases in consumer spending that we have observed since the spring. Over the past half year, consumer spending excluding motor vehicles has been increasing at a pace of roughly  $2\frac{3}{4}$  to 3 percent, and we are expecting more of the same in coming months. That relatively steady expected growth reflects some crosscurrents that seem likely to be at work. Real income gains should be bolstered by the recent fall in energy prices and continuing, albeit modest, gains in employment. But the lagged effects of higher borrowing costs and an ebbing of positive wealth effects from housing are expected to hold spending below the gains in income and result in a slight upward tilt to the saving rate. Obviously, given the importance of consumption in overall aggregate demand, developments here will have a critical bearing on the probability of achieving our projected soft landing. A snap-back in consumer spending in coming months—an outcome that seems to underlie some of the outside forecasts that are stronger than ours—might lead to no landing rather than a soft landing. In contrast, any serious faltering of consumer spending is “buckle the seat belts and assume the crash position.”

The third major development that we will be looking for is another sustained step-down in the pace of employment growth. Slower employment growth is a key link in the multiplier mechanism through which the housing-induced slowdown in aggregate output and spending propagates forward into below-trend growth next year. We correctly anticipated the first leg of that slowing earlier this year, when average gains in nonfarm payrolls dropped from the 200,000 per month pace of the preceding several years to the roughly 120,000 per month pace observed since the spring. But our projection anticipates a further slowing in the fourth quarter to an average pace of about 75,000 per month. To be sure, the increase in September was just 51,000, but that came on the heels of a gain in August of 188,000, so we wouldn't want to lean too heavily on the September observation for support. Moreover, if asked to present just one piece of evidence that casts the greatest doubt on the staff projection at

present, I would point to initial claims for unemployment insurance. Claims have basically been moving sideways in recent months and provide no indication that a further softening in labor markets is under way. Given the looseness of the relationship, our forecast of payroll employment is not inconsistent with the current level of initial claims, but right now this important piece of our forecast seems to have more upside risk than downside risk.

The fourth element of our forecast that we will be looking for in coming months is some signs of slowing in business fixed investment. Of course, the accelerator consequences for equipment spending of the slowing we now think is under way in aggregate demand is really a story for 2007, and given the volatility in the data, it will take some time to detect that slowing when, or if, it occurs. But more immediately, we are expecting to see some slowing in nonresidential construction from the 20 percent pace that we've experienced over the past half year to something closer to a 10 percent pace in coming quarters, thus providing less offset to the weakness in residential construction than has been the case thus far this year. With energy prices leveling out, the upward impetus from drilling and mining activity seems likely to gradually abate. Outside drilling and mining, smaller employment gains, slower growth of manufacturing output, and still-high vacancy rates suggest to us that this sector will cool somewhat going forward.

The final item on the scorecard is inflation. We are going to be looking for core PCE prices to continue to increase an average of about 0.2 percent per month for the remainder of the year, with core CPI running between 0.2 and 0.3 percent per month. Those increases would be higher than in most recent years but lower than the pace observed last spring. Moreover, some of the key factors that underlie our projection of a gradual slowing of core inflation over the projection period now seem to be falling into place. After nearly three years of persistent upside surprise, oil and other energy prices have dropped noticeably from the levels of late summer. If these recent developments hold, the cost pressures from rising energy prices should ease over time. Moreover, the sharp increases in residential rent that occurred in the spring appear to have simmered down of late, and we are expecting that pattern to continue in coming months. Meanwhile, most of the major measures of inflation expectations that we monitor have continued to fluctuate in a reasonably narrow range, and we expect that to remain the case going forward.

I am tempted to say that, armed with this scorecard, you will arrive at the December meeting with a clear idea of how the staff forecast has stood up to the incoming data. But of course, we all know how the story goes. Much like the cliffhanger serial movies of the 1930s, the promise appears to be that, if you come back next time, all the current problems will be resolved. However, given rational expectations, you know that, to the extent any problems are resolved over the intermeeting period, they will simply be replaced by a new set of puzzles and perils. Karen will continue our presentation.

MS. JOHNSON. Once again I find myself reporting to you that movements in global oil prices are among the developments during the intermeeting period that were factors in our deliberations about the external sector. Global crude oil spot and futures prices fell further following our September projection but by differing amounts over the maturity spectrum. When we finalized the current baseline forecast, spot prices and very near term futures prices had moved down more than \$4 per barrel; futures contracts that mature at the end of 2007 had recorded price declines of about \$2; those maturing at the end of 2008 had price declines of about 50 cents. Indeed, for contracts maturing beyond 2009, prices actually rose such that the far-dated contract for December 2012 had moved up about \$1 per barrel in price. We adjusted our projection for U.S. oil import prices by amounts similar to these changes in futures prices. The differential movement in prices implies that, even though prices have moved down all along the path through the forecast period, this path now slopes up more steeply than it previously did. So our outlook is for oil prices to rise rather sharply over the forecast period, although from a lower starting point than in the September Greenbook. The reasons for the additional decline in prices during September and October include the return of production to near previous rates at Prudhoe Bay, the absence of any sign of late-season hurricanes in the Gulf of Mexico, and awareness of current high inventory levels. These inventories are by their very nature transitory; hence, market participants seem to believe that some of the current abundant supply will diminish over time, leaving limited spare production capacity and chronic risks to production in Nigeria, Iran, Iraq, and elsewhere. Late last week, OPEC announced production cuts of 1.2 million barrels per day as of November 1. Although the size of actual cuts by individual OPEC suppliers remains to be seen, we judge that significant cuts, albeit not as large as those announced, are needed for prospective demand to be consistent with prices in the futures curve. Those prices remain elevated—around the levels expected at the start of this year.

We again asked ourselves how the substantial drop in oil prices since their August peak matters for the U.S. economy. As Dave mentioned, some of the near-term variance in U.S. real GDP growth reflects the path of real imports, including oil imports. The nominal trade deficit is clearly narrowed as a consequence of lower oil prices. We expect that the average oil bill in the fourth quarter will show an improvement from the third quarter of \$60 billion at an annual rate. The net trade balance on nominal goods and services will improve by just about the same amount as other trade components experience small, offsetting changes. As oil prices rise going forward, the nominal value of oil imports should move back up; but for 2007 as a whole, we expect that the total figure will be about the same as the total for this year, followed by a moderate increase in 2008.

With respect to our forecast for exports, we again expect that real exports of goods and services will expand at an annual rate of about 4½ percent through early 2008 and then will accelerate slightly, to about 5 percent, over the second half of 2008. We see this pace of export growth as reflecting moderately strong growth of trade in both services and merchandise. These components in turn reflect solid average growth of around 3¼ percent in foreign real GDP. The projected

acceleration in real exports in 2008 reflects a boost from relative prices as U.S. export price inflation moderates. This projected pace of export growth is somewhat below that observed in recent years, particularly in the first half of this year. To some extent, the double-digit growth of U.S. real exports early this year reflected rapid real GDP growth abroad at that time. But our models cannot explain all the strong growth, and a sizable positive residual has emerged in our model. During the first quarter, exceptionally rapid growth of real GDP was widespread abroad as most industrial countries and many emerging-market economies in both Asia and Latin America recorded particularly robust real expansion.

The rapid growth moved many foreign economies closer to potential and was not sustainable over the long run. We read recent indicators of activity abroad as generally confirming our expectation that slowing from those very rapid rates would occur through the year. According to the data, among the industrial countries, Canada and Japan have GDP already decelerating in the second quarter. In contrast, the pace of expansion strengthened in the euro area; but with further tightening of monetary policy and an increase in the value-added tax in Germany to take effect at the start of next year, our outlook calls for a slowdown in growth there as well. For the emerging-market economies, the most important news is Chinese third-quarter real GDP growth, announced just after the Greenbook was distributed. Based on the data and our best estimate of a seasonally adjusted series for the level of Chinese GDP, real growth in China was at an annual rate of about 5½ percent in the third quarter from the second quarter, following two quarters of growth above 12 percent. These data are only approximate as they are inferred from the annual growth rates published by the Chinese authorities. However, it does seem clear that the measures implemented by Chinese officials to cool the economy have had some effect. We are projecting that growth going forward will return to rates between 8 and 8½ percent. Of course, the band of uncertainty around this forecast is significant. We judge growth at that pace to be consistent with Chinese potential and acceptable to Chinese officials. This picture of real output growth abroad is a benign soft landing. We are projecting slowing that does not overshoot in many foreign economies, including importantly the euro area, Japan, and China. We believe that domestic demand growth in Canada, Japan, the euro area, and Mexico will continue to sustain their domestic expansions and growth in the global economy and will underlie ongoing moderate strength in U.S. exports.

With respect to the current quarter, trade data for August surprised us with the strength of exports and led us to revise up by more than 2½ percentage points our estimate of the annual rate of growth of real exports in the third quarter. The surprise was widespread across categories of merchandise trade other than computers and semiconductors and included strong exports to most of our trading partners, with the important exceptions of Canada and Mexico. With no special stories or specific components of interest, we have projected that real export growth will revert to its historical relationship with foreign output and relative prices. However, the positive surprise in August reminds us that there is upside risk to our forecast for real exports as well as downside risk should foreign growth slow more than expected. Real

merchandise imports in August came in above our expectation as well. We have accommodated that surprise in part by reducing real imports projected for the fourth quarter, particularly real oil imports.

All in all, our baseline forecast for the combined contribution of imports and exports to U.S. GDP growth over the forecast period is for a small negative effect during the second half of this year that becomes slightly more negative through the second half of 2008, reaching about 0.4 percentage point as strengthening U.S. real GDP growth boosts import growth above that for exports. David and I will be happy to answer any questions.

CHAIRMAN BERNANKE. Thank you very much. Are there questions? President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I have a question for David, and it concerns the Greenbook alternative scenarios and the morals we should draw from them concerning the Committee's ability to affect inflation. The Greenbook this time had two scenarios showing how the forecast would be affected by shocks to aggregate demand. One was a stronger demand scenario; the other a housing correction with spillovers. Demand, of course, is much weaker in that second scenario. In both of them, unemployment by the end of 2008 deviates markedly from baseline, but even so there is virtually no effect on core inflation. It falls just 0.1 percent by the end of 2008 in the negative housing shock scenario, even though unemployment rises to 6 percent. When I actually took a magnifying glass to the panel on page I-21 to look at the core inflation paths, the shocks appeared actually to have a perverse effect on core inflation. The housing correction shock has a perverse effect on core inflation in mid-2007, with inflation actually up in the weak demand scenario and down a bit in the case where demand strengthens.

Now, I scratched my head and asked myself if I could I invent a reason that this might occur. My thoughts went to possible repercussions on the exchange rate that might have an inflationary effect. But my trusty staff told me that it might be something else entirely—namely, the way inflation expectations are modeled in FRB/US. They told me that inflation expectations

in these simulations aren't much affected by any movement in unemployment with shocks like this because implicitly those forming inflation expectations take the shock to be transitory. But expectations are perturbed, and perversely so, by the reaction of the Fed to the shocks. In other words, the Taylor rule type response that's embodied in the scenarios has the Fed lowering the fed funds rate to address economic weakness following a downside housing shock. My staff tells me that the Fed's cut to address the weakness then raises expected inflation, which passes through into inflation in these scenarios, and that's why we get a stronger housing correction perversely raising inflation.

Would you comment generally on this? Do I have the correct understanding of how it works? If I do, do these simulations give an unduly pessimistic assessment of the effect of aggregate demand shocks both on inflation and on our Committee's ability to affect inflation through policy? Is it plausible to assume in your view that easier monetary policy has this direct effect on inflation expectations, even when all it's doing is offsetting a demand shock?

MR. STOCKTON. I think, actually, your first story was the more potent one in offsetting these effects—that we'd have an exchange rate response to the monetary policy effect. Now, there is a small change in inflation expectations in response to your doing something the markets don't expect you to do given the macroeconomic outcomes. The markets lean in a direction in terms of inflation expectations, and if they see you easing significantly, they're confused as to whether that might say something about your inflation objective being higher.

MS. YELLEN. Even when there are negative demand shocks and even though unemployment is rising?

MR. STOCKTON. That is part of it—yes. Obviously, the question is whether they see those shocks as well.

MS. YELLEN. They would see unemployment rising.

MR. STOCKTON. Well, they don't see that. The unemployment effects do take a while to begin to develop. All these things happen very slowly. If something is perverse here, it is that we're showing too short a time frame for the effects to actually play out. With an output gap opening up, we would obviously expect in this model that eventually there would be downward pressure on inflation in the housing scenario and upward pressure in the stronger demand scenario. So there's nothing unstable about the model or something that works in the wrong direction over the longer haul.

But as you know, inflation is so inertial in the basic structure of the model that those effects don't really show through and, because these shocks typically are relatively slow, they tend to get offset in the near term by exchange rate movements in particular but by some movement in inflation expectations as well. So I don't think that's necessarily a flaw of the model, but I do think it's probably a flaw in the short time frame that we show for these alternative scenarios, where most of the interesting effects on inflation, if you think it takes as long as the model does, are typically happening beyond the horizon that we're showing here. That gets back to an issue that Governor Mishkin raised last time about wanting to look a little further down the road to actually see the response of inflation. Now, that doesn't mean that the model has got it right in terms of how persistent or inertial inflation is. I think reasonable men and women could come to different views about that. But I don't think there's something perverse in the underlying structure of the model.

CHAIRMAN BERNANKE. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. Dave, I want to ask you a question about residential housing markets and the effect of this slowdown that we've seen on the prices of

housing. As you mentioned in your comments, we've seen the rate of increase slow. In one of the alternative simulations, you actually plugged in a major reduction in housing prices. Are you aware of any empirical work that has been done, or have you done any work to show us what the time lags would be here that we could expect to see from the drop in housing to some effect on housing prices going forward?

MR. STOCKTON. A little work has been done in this area, but it's a bit like modeling the stock market. You wouldn't take it very seriously in the sense that these are asset markets and they're sometimes moving in ways that are very difficult to model on the basis of, for example, fundamentals—especially in a period when, by our assessment, prices have moved up significantly above what we think can be justified in terms of interest rates and rents. So now we have a situation in which that asset price misalignment is projected in our forecast to just barely begin to unwind but we're really uncertain about what the timing of that process is going to be. One of the reasons we wanted to show the alternative simulation is that we've taken a fairly conservative approach here. Our slowdown in the growth rate of house prices, to roughly 1½ to 1¾ percentage points over the next two years, doesn't make a big dent—if you remember from the briefing that we did one and a half years ago—in the price-to-rent ratio, which we plotted there and showed that that had increased very significantly.

So our best guess is that, as in the past, those nominal prices will flatten out rather than actually decline. But the run-up was so large that we couldn't rule out this time around that the adjustment of house prices could be more significant and more rapid than in the past. But I don't know of any reliable empirical model or evidence. We've certainly done our share of work in modeling those house prices, and I know our colleagues at the New York Fed have as well. There's a lot of controversy about whether there even is an asset price misalignment, much less,



if there is, how it will unwind. So I don't have a lot to offer you there, except that we're going to try to present you with the range of possible outcomes in the sensitivity of our forecast to the baseline assumption that we've made. In that regard, I still see more downside risk there than upside risk to our house-price forecast.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. I have just an informational question, David and Karen. If my memory is correct, the September CPI numbers excluding food and energy were not substantially different from those in August. What I'm curious about, if you could just quickly comment, are the dynamics of owners' equivalent rent (OER). That was you, Dave.

MR. STOCKTON. As you know, those increases were very substantial in the spring. We had projected them to slow some. They have slowed some. Whether that is noise in the data or an actual response to developments on the ground in housing such as—as I think Governor Bies has mentioned—the possibility that some of this flow of excess housing may turn back into the rental market, and that could help put a lid on rents. We're expecting a little further slowing going forward. As I noted in my remarks, I see some upside risk, so we're taking comfort from the fact that those 0.4 and 0.5 percent increases that we saw in the spring have now been running more like 0.3 and 0.4 percent increases. But it's too soon to conclude that that whole process is over—that it's all worked out and that things are going to slow down. There's enough volatility in those rents that we could experience a return to the increases that we saw in the spring. We're not forecasting that, but I don't think that outcome should be out of your probability distribution.

Obviously, our reason for expecting some slowdown is that, in fact, there will be some adjustments in the housing market and especially that people's expectations for price appreciation on owner-occupied dwellings have shifted down significantly. That downshift is

going to make homeownership look less attractive and the rental market look stronger. That's why we get some slowing but not so much as to go back to the rates that we had a year or two ago, when they were increasing more like 2 and 2½ percent.

MR. FISHER. So, in summary, we are looking at high threes, upward.

MR. STOCKTON. High threes in the near term on rents, going down, we think, to more like threes by next year.

MR. FISHER. Karen, the most arresting figure, as you pointed out, is reported Chinese growth in the third quarter. What does that stem from? Is it their faux monetary policy or moral suasion or what we call, negotiating with the Chinese, "immoral suasion?" Or do you sense that some capacity constraints are at work here?

MS. JOHNSON. Well, I don't know that we have enough detailed information to speak definitively to the question of whether some capacity constraints were reached. We do see the slowdown occurring, importantly, in the sector of fixed investment. That is, the GDP numbers themselves do not give us real component information, but other measures of investment did turn down in the third quarter in a way that's consistent with seeing GDP slow. The timing of the latest round of administrative measures suggests to us that we are seeing some effect from those. I don't know that I would call it monetary policy exactly, but I think the bundle of moral suasion and, to some degree, real actions that, in and of themselves, have some bite contributed to this. After two quarters of what we infer from manipulating the numbers as very strong growth, is it possible that in some particular places capacity constraints are reached? It certainly could have been the case.

From our attempt to turn the series into quarter-to-quarter changes rather than the data that are announced, we certainly had higher numbers for the first half of this year than were

generally talked about. The released numbers were tens and so forth, and we had twelves. Similarly, as a consequence we had a much greater slowdown than the released numbers, and we could be exaggerating both. Possibly it wasn't really quite as strong as we thought in the first half, and it may not have slowed quite as much as we saw in the third quarter. But it would be a real gamble on our part to conclude that it wasn't, at least in some important sense, due to the administrative measures that they took. I don't think the officials are so unable to have a consequence with their policy tools, such as they are, if they are really determined—and they certainly seemed to be determined. Thus I would attribute much of the figure to the administrative measures, but we can't rule out some capacity constraints here and there.

MR. FISHER. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. Thank you. As you suggested, labor force participation plays an important role going forward in how you think about your forecast of the longer-term growth rate and how it evolves. So I have two questions about labor force participation in trying to understand where it comes from and what's going on. One is the distinction between what's going on cyclically versus what's going on in your trend demographics of the labor force participation rate. That distinction is part of it, as is whether the way you estimate the cyclical component of employment and so forth affects the forecast and whether it adjusts very quickly or very slowly in shaping the picture going forward, particularly into 2007 and 2008.

The second question has to do with the secular decline in general that you're predicting from demographics. Is there any mechanism in the way you come up with those forecasts that has feedback from the economy? For example, through a certain period, labor participation rates for the 60-year-old cohort were falling rapidly. From more-recent data, that cohort appears to be back in

the labor force more aggressively than it was. I'm not exactly sure why that is. Maybe it's uncertainties about pensions, Social Security, and what have you and whether real wages and adjustments in the labor market affect the secular decline. So I'd like a little discussion about what's going on in the model that might help me understand where those pieces fit.

MR. STOCKTON. I'll turn your question around and address the trend aspect first and then discuss a bit how the cycle gets overlaid on this. Our forecast is based on some research that we've been doing in the past several years that was recently presented at the Brookings Panel on Economic Activity. It's based on a very detailed decomposition of the labor force by cohort, gender, and age. The downward tilt in our projected trend in labor force participation is driven principally by two factors. One is the end of the large uptilt in the participation of women in the labor force. For a long time, women's participation had been driving the upward trend; that continued rise offset the downward trend in the men's participation in the labor force, which actually has been a long, ongoing trend that we expect to continue. Now the labor force participation of the entering cohort of women looks a lot like women exiting. We're not getting any further upward press there, but we are seeing some continued downward press from men. Second, the labor force is aging, and it's aging within this forecast frame. In 2008, we're at the front edge of the baby boomers who are eligible at age 62 to collect Social Security payments. Bill Wascher is here if you want him to add anything about the details of his research—but when we run that model, it projects a pretty steep trend in labor force participation.

Now I will get to your question about all the dynamic feedbacks. I think we would admit that this work does not have all the general equilibrium effects, the potential ways in which employers and employees might respond going forward over the longer haul to the big demographic changes that are at hand. So, any substantial changes in the incentives that employers are providing

for older workers to stay in the labor force longer, if they occur, are really not built in here in any significant way. I feel pretty darn comfortable with this forecast over the time frame for which we're doing it, which is through 2008. I think that these demographic factors will, in fact, be felt and that the labor market institutions will probably not adjust quickly enough to overwhelm the downward demographic tilt. But if we go out a lot further, we have more thinking to do about how those adjustments might occur and whether the steep downward trend that we are currently projecting would continue. As you are probably aware, in trying to model labor force participation, real wages and various other things that make a lot of sense to economists don't always show up strongly in those models. So in this forecast we're letting the demographics drive the trend in labor force participation.

On top of the demographics is the cyclical behavior of labor force participation. We now think the labor force participation rate is probably a bit above its trend. Given the cyclical behavior of participation, we think that is not unreasonable to think that labor force participation has probably already overshot its trend—admittedly, just a bit—when the unemployment rate is below the NAIRU. So the employment dynamics and the labor force dynamics that we have going forward are driven both by the labor force participation rate returning to its trend and that trend continuing to decline. As we discussed at the last meeting, those things together produce a very small increase in overall employment growth. Also, as I think we mentioned last time, we recognize that we're out of the consensus on this piece of the forecast. Again, I haven't seen anything over the past year or two to make me more uncomfortable. If anything, I've become more comfortable with that view, given the behavior of the labor force participation rate and the unemployment rate in this period as labor markets have tightened up.

As I said last time, however, if we changed this aspect of our forecast going forward and went back to a forecast of just a flat labor force participation rate, we'd obviously raise employment growth and the growth of potential output. But we'd also raise the growth of projected actual output, and thus this change wouldn't affect our forecast of the output gap much at all going forward. So this has a big effect on the top-line GDP but not on the GDP gap. Thus if we make a mistake here, it will not have significant policy consequences because with demand and supply revised up by similar amounts, you don't have to have a higher interest rate to choke off that demand.

CHAIRMAN BERNANKE. Thank you. President Pinalto.

MS. PIANALTO. Thank you. Dave, I have a question on the less-persistent inflation scenario. The description indicates that the scenario allows for inflation to be less persistent in the baseline perhaps for structural reasons. Could you give me a couple of examples of how the structure might change and what the data might tell us or what data would be telling us that such a change is occurring?

MR. STOCKTON. Clearly, if you have managed to achieve a significant degree of credibility and that credibility has anchored inflation expectations at a rate of 1½ percent going forward and if, therefore, agents expect whatever inflation shock you've had to be temporary and for inflation to revert to its average over the past ten years relatively quickly, then inflation could quickly fall back to 1½ percent as suggested by the scenario. We would be looking for evidence that the level of inflation expectations had remained exactly where it was previously and had remained unchanged, at a range of roughly 1½ to 1¾ percent. Now, we don't think that's the case, so that scenario does not underlie our baseline forecast. In fact, we think inflation expectations are probably higher than that, more like the 2 percent level that I think implicitly underlies this forecast.

But work by our colleague John Williams at the San Francisco Fed, estimating over a very short time span, does produce an estimate that suggests that it might be reasonable to expect—as a good forecast—that inflation reverts reasonably quickly to its recent average. We're not persuaded by that, but we don't think it's entirely unreasonable.

MS. PIANALTO. Thank you.

CHAIRMAN BERNANKE. Any other questions? Dave and Karen, thank you, as always, for a very good report. We're ready now for the economic go-round. We haven't made much use of the two-handed intervention lately, but it's an option. If you want to make a comment or ask a question, please raise two hands instead of one. We'll start with President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. Conditions in the Seventh District appear to be quite similar to what I reported last time. Except for housing and autos, activity remains on a solid footing, and most of our contacts are relatively optimistic about the outlook. For instance, the two large temp firms we talk to regularly both reported that, although billable hours were roughly flat, their clients were upbeat about the outlook. Furthermore, demand for workers in light industry—the segment most closely tied to the national business cycle—continued to grow. In terms of wages, both temp firms noted that compensation increases have been running much higher than last year at this time. The difficulties of the Big Three automakers continue to be a problem for our region and are showing through in the national numbers for the third quarter. These difficulties don't stem from an overall lack of demand. Light vehicle sales continue to run at a pretty healthy pace, as the Greenbook notes. To some extent, the Big Three's difficulties are a consequence of the energy price shock. Demand has shifted away from pickups and big SUVs, which have been their bread and butter. Despite the recent gas price

declines, Ford and GM told us that they do not expect a reversal of this shift anytime soon. Otherwise, the District is doing reasonably well. I heard a lot of optimism. Indeed, a few contacts explicitly described the current slowdown as similar to the brief pause in the mid-1990s, which was followed by sustained expansion.

Turning to the national outlook, clearly economic activity was soft during the third quarter, but the fairly solid growth in consumption and business fixed investment indicates that at least to date we have not seen a spillover of the weakness in housing to other sectors of the economy. This is consistent with the anecdotes that I'm hearing. Looking ahead, we expect several quarters of weak residential investment, but activity in other sectors should increase roughly in line with longer-run sustainable rates. Assuming market expectations for interest rates, we see GDP growth averaging modestly below potential over the next year and a half. We think growth will be a bit above potential in '08. In our view, the underlying fundamentals—wealth, income, interest rates, and the current level of liquidity in the economy—should support a higher level of spending than what's in the Greenbook baseline.

Of course, a major risk for our outlook is that there could be more-substantial spillovers from the housing sector. As has been noted around this table, it could take some time for the weakness in housing demand to show through to house prices. I was hoping we could get more information, but it sounds as though the research isn't there yet. If prices do fall substantially, a reduction in wealth could have serious ramifications for consumption and spending overall. It's hard to say when we'll have a clearer picture as to how events are unfolding. At some point, probably before the decline in the broad measures of housing prices, we'll likely see early evidence in either anecdotes or risk spreads. Or if the risk is overstated, we may hear of improvements from our contacts.



Turning to inflation, the projections from our models have not changed much with the incoming data. They still show core PCE inflation in '08 coming in between 2.3 and 2.6 percent, depending on the period used to estimate the models. So I continue to have the same questions I had last time regarding the interplay between such inflation rates, inflation expectations, and Fed credibility: Will continued high levels of core inflation eventually make the public doubt our resolve to maintain low and stable inflation? Even if inflation is less persistent, as some have suggested, will it settle out at rates like those in the past few years—namely, 2 percent—rather than the 1.6 percent in the Greenbook's less-persistent inflation scenario? Are the current long-run core PCE inflation expectations, which are likely above 2 percent, just simply too high? I'm quite concerned that the answers to these questions might be "yes." If so, and the housing spillover risks fade, then we may have to act more forcefully than the Greenbook baseline policy assumption in order to ensure that inflation is more clearly headed into the range consistent with price stability.

CHAIRMAN BERNANKE. Okay, Governor Kohn.

MR. KOHN. I wondered, President Moskow, if you had a sense of whether Ford was in a kind of death spiral—I might be influenced by the headlines of today and yesterday—at risk of losing the confidence of customers, so it won't be able to sell cars, and of creditors. I'm wondering whether that would have any effect on the macroeconomy, or whether we just take down the Ford signs, put up Toyota signs, and continue to produce.

MR. MOSKOW. My general assessment has been that this is a market share story. It's not a story of aggregate demand for automobiles or light vehicles in that it is a shift from the domestic, what we used to call the Big Three, to foreign manufacturers, whether they're producing here in the United States or exporting more to the United States. Obviously, we know

there has been a big ramp-up in transplants here, but the import share of light vehicles is going up, too. So I generally think it's a market share story and, as you said, there will be a lot of dislocations if, God forbid, Ford goes out of business. But I think it would just be a shift.

Now, in terms of whether what's happening at Ford is, as you said, a death spiral, I really wouldn't know. A new CEO is coming in, and there is the old adage, "When a new CEO comes in, he's going to write off as much as he possibly can and get it behind him." So some of that may be occurring as well. But the problem with the U.S. firms is both the product they have and the perception of that product. I think their product has gotten better. I don't, personally, think it's as good as the foreign firms' product, but I think the perception of it is much worse than the perception of the foreign firms' product.

CHAIRMAN BERNANKE. President Moskow, didn't you say that you saw output growing below potential in '07? Did I hear correctly?

MR. MOSKOW. Slightly.

CHAIRMAN BERNANKE. So with energy prices down and so forth, why do you see core inflation rising from near-term levels?

MR. MOSKOW. No, I saw it coming down—oh, you mean in the outer years. Well, I think several things are going on. There is still the spillover of energy price increases flowing through the economy, but also there are more resource constraints than are built into the baseline forecast.

CHAIRMAN BERNANKE. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. The New England District economy continues to grow at a moderate pace, pretty much as it was growing the last time we met, with job counts slowly increasing and business and consumer confidence relatively good about both

current and future conditions. As I've noted before, income growth has been robust in the District, with regional income growing better than 7 percent from second quarter '05 to second quarter '06. Indeed, incomes in Massachusetts and Connecticut both rose about 9 percent. Reflecting this rise, the fiscal condition of the states in the region, while varied, remains positive. Regional corporate health is solid, and readings of regional stock indexes follow the positive pace of the nation's financial markets. Contacts from a wide range of manufacturing industries reported positive trends; fewer cost pressures from commodity, energy, and interest rates; and a continuation of competitive pressures to restrain costs and keep prices stable. We regard this pressure as a return to business as usual.

On the negative side, the slowdown in the housing sector becomes more apparent with each passing month. According to the overall OFHEO house-price indexes, year-over-year appreciation in the second quarter of '06 for New England was about half of that for the nation. The change from the first to the second quarter in '06 was virtually zero. The region now has the lowest rate of annual housing appreciation of any area of the country except the Midwest. This situation is not entirely unwelcome, as housing price levels in the region remain quite high relative to the nation, and there has been much hand-wringing locally about the effect high housing costs have on attracting skilled labor to the region. Of course, the cyclical effect of a sharp residential investment slowdown is of concern. Existing home sales volumes are down 12 percent from their 2005 peaks. New home construction is weakening significantly, and construction employment has declined in both Connecticut and Massachusetts since year-end 2005. Indeed, negative commentary from area business contacts revolved mostly around markets for products aimed at the residential housing industry. While there may be some light at the end of this tunnel, with recent lower mortgage interest rates and some sense of bottoming out,

the usual seasonal slowdown in the real estate industry as winter approaches may make this improvement difficult to appreciate for some time.

The effect of slowing residential investment remains one of the key uncertainties on the national scene as well. Combined with the negative effect of trade, housing trends have caused us to mark down our estimate of third-quarter GDP growth to about the level of the Greenbook. However, positive incoming data on employment, consumer spending, and corporate profits, spurred as they have been by favorable trends in energy prices, financial markets, and worldwide growth, support a modest rebound in overall activity in the fourth quarter and a forecast for 2007 and 2008 of just slightly less than potential. Indeed, I was pleased to see the upward revision to the Greenbook forecast for the fourth quarter of this year, as I had worried whether the earlier trajectory had increased the risk of a spiral downward into a recession. I don't think that's likely, and I realize that overall the second-half GDP projection remains about the same. But the upward revision to the fourth quarter in the Greenbook, which brings it closer to our Boston forecast, makes me somewhat more comfortable about the underlying trajectory of economic activity.

We, like the Greenbook authors, have revised down slightly our estimate of potential, so our sense of any gap in resource usage remains about the same as it was at the last meeting. Thus, unemployment rises very slowly, to just about 5 percent in 2008, and inflation falls slowly as well, along the lines of the forecast at the last meeting. All in all, that is not a lot of change. I must admit, however, to some small amount of hope that we may be seeing the bottoming out of the housing market decline because of the mixture of the data that Dave referred to earlier. Moreover, other aspects of the current situation seem quite positive as well—in particular, the very accommodative nature of financial markets and the continuing profitability of the nation's

corporations. Thus, the risks to what continues to be in many ways a rather benign forecast seem to me to be a bit less on the downside than they seemed at our last meeting. Energy-driven inflation may be lower as well, but I remain concerned about the underlying pressures on resource utilization if the economy does not slow as much as we now expect. Corporate-driven productivity growth, though we haven't seen it escalate recently, could come to the rescue here, but I think it's hard to bet on that. Thus, I do see some continuing uncertainty as to whether inflation will be as well behaved as in either the Boston or the Greenbook forecast.

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. Our regional economic story is similar to that of the national economy. Regional activity has slowed in the third quarter, mainly because of the housing sector. In general, our business contacts expect the regional economy to continue to expand, albeit at a modest pace. Price pressures remain elevated in the Third District but have not strengthened over the intermeeting period.

Turning to the individual sectors, manufacturing activity in our region has softened over the past two months. The index of general economic activity in our business outlook survey, which turned slightly negative last month, remains slightly negative this month, indicating basically not much change since September. However, there were some positives in the October survey that were not in the September report. In particular, there was a rebound in the indexes of new orders and shipments, suggesting slightly positive growth in our respondents' firms. Also, manufacturing executives were much more optimistic this month about future activity, with most indicators rebounding from their September low readings. This optimism is consistent with President Moskow's comment about the optimism of some executives that he has observed. Now, consistent with the slowdown in activity, payroll employment growth in our three states

slowed in the third quarter to an annual rate of about 0.7 percent, compared with 1.1 percent in the nation. The unemployment rate, which had been running under the national rate for the past three years, has now moved up to that rate. Still, our business contacts as well as respondents to our manufacturing survey continue to cite difficulty in finding qualified workers as one of their major business concerns.

As in the nation, the housing sector in our region continues to decline. We've seen some slowing in the value of nonresidential contracts as well over the past three months. But these data are quite noisy, and I think it's too early to read much of a turning point into the nonresidential construction sector for our region at this point. Office vacancy rates continue to edge down, and the net absorption of office space continues to be positive.

Consumer spending continues to hold up well in our region. We saw a pickup in retail sales in September, except for autos. Area retailers told us that their sales had increased in recent weeks, and their back-to-school sales exceeded their expectations. Their view is that continued growth at that pace depended on consumer confidence, which for the mid-Atlantic region increased in September, no doubt because of the decline in oil prices.

The Fed's current economic activity indexes indicate a slowing in activity in our region over the past three months, especially in New Jersey, which has shown the sharpest deceleration. As of August, year-to-date average growth in these indexes (weighted by gross state product) for our three states has been about 1.8 percent, compared with 3 percent for the United States. Over the past three months, regional growth has slowed to about 0.6 percent. The leading indicators for our three states also have moved down this year, suggesting only modest growth over the coming six to nine months.

On the inflation front, consumer prices in the Philadelphia region continue to rise at a pace faster than that of the nation. The faster pace is due mainly to the larger increases in shelter prices in the Philadelphia metro area compared with those in the United States. On a more positive note, while area manufacturers continue to report higher production costs, these cost increases have been less widespread in recent surveys than earlier in the year. The index of prices paid in our manufacturing survey has declined for the past three months, and the index of prices received was down significantly in October. So while the levels of these indexes remain high, indicating continued inflationary pressures, some solace may be found in the less elevated levels of these indicators, at least in recent months.

For the national economy, my outlook is not much different from what it was at the last meeting. Real GDP growth in the second quarter was revised down to 2.6 percent, as has been noted, and the data received to date suggest that growth in the third quarter was even weaker, perhaps 1 to 1½ percent. I expect some rebound in the fourth quarter and, like President Minehan, was pleased to see the upward revision in the fourth-quarter forecast in the Greenbook. The main source of the slowdown, of course, is the fall in the demand for housing. Manufacturing also softened in the third quarter compared with its robust pace earlier in the year. About half of that slowdown was due to autos, and I expect some rebound there, too, in the fourth quarter. Trade subtracted from growth in the third quarter relative to the second quarter, but again, as has been pointed out, I expect that to be less of a drag in the fourth quarter than it was in the third.

So aside from housing, most other sectors of the economy, including consumer spending and business investment, are holding up, even in the Philadelphia region in the Third District. They aren't growing as rapidly as they were in the first part of this year, but they are growing

somewhat below trend, and they continue to expand. If the slowdown in housing continues to be an orderly one, without large spillovers as has been frequently mentioned, I would not characterize that correction as unwelcome. Housing activity has been at an unsustainably high pace in recent years. Of course, at this point we cannot rule out the possibility that the correction in housing from the unsustainably high pace of activity that we've seen over the past few years will derail the expansion. But so far, we have not seen spillovers of housing into other sectors. In particular, we have not seen any retrenchment by the consumer for the most part. The moderation we've seen in consumer spending after the strong first quarter is largely in line with expectations. Real disposable income growth remains healthy, and we have been lucky with two positives—the decline in gasoline prices and the rise in the stock market.

We've had some hopeful news on the inflation front over the intermeeting period, but the level of inflation continues to concern me. As we anticipated at the time of our last meeting, the drop in energy prices led to a significant deceleration in headline inflation for September. Although the twelve-month change in core CPI actually edged up to 2.9 percent, a rate that I consider well above price stability, it may be beginning to stabilize. But, frankly, a lot of uncertainty remains, and it is dangerous, to my mind, to rely too heavily on one month's numbers. Some of the acceleration of core inflation over the past year was likely due to the pass-through from energy prices, as we discussed before. So if oil prices fall or continue to stabilize, then acceleration of core inflation from this source will likely dissipate. However, we've seen energy prices retreat only to move back up again, so I don't think we should become too sanguine. Indeed, the inflation picture remains uncertain. I'll be more comfortable when we begin to see twelve-month core inflation begin to decelerate. To the extent that some of the acceleration in inflation was fueled by very accommodative monetary policy over the past five



years, we still need to consider whether monetary policy has firmed enough to remove the cumulative effects of the past policy accommodation to get inflation back down to a level consistent with price stability in a reasonable time so that our credibility is not at risk. The longer we allow that deviation from price stability to persist, the higher the risk to our credibility and the higher the risk that recent high inflation readings will raise longer-term inflationary expectations. So far, long-run expectations have been stable, and shorter-run expectations have fallen with oil prices. Nevertheless, I think the Fed's commitment to price stability deserves our protection. One thing to note going forward, though, is that if economic growth remains below trend for a while, then there's an implicit firming of monetary policy, even without changing the nominal interest rate. Given our economic outlook and the risks to that outlook, at this point that may be actually the most desirable path. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. For a while now, I've been somewhat more pessimistic than most of the Committee about the downside risk to the real economy. I was beginning to get worried that this might be the perpetual disposition of someone from Ohio. [Laughter] As a prominent member of our business community said to me not too long ago, it's not the weather, it's the climate. [Laughter]

Since our last meeting, I've become more comfortable with the idea that substantially weaker-than-forecast growth is less probable—partly because we're now a little further down the road without any signs that the worst-case scenarios are materializing and partly because my directors and my business contacts seem more positive about the economic outlook. Specifically, as I listened to some of my business contacts in construction, retail, and even real

estate, the expectations that things will get substantially worse just aren't there. Also, the demand for labor seems to be growing at a moderate pace.

On the price side, my contacts are not indicating much of an impetus for higher final goods prices. Although projected compensation growth seems to be firming just a bit, my contacts are telling me that they think productivity gains will keep costs in check. With the declining energy and material costs, I don't hear much about the potential for accelerating pressures on prices.

When I combine what I'm hearing from my District contacts with the aggregate data that have come in since our last meeting, I sense that we have weathered the worst in softness on the real side for now. In September I noted that my biggest concern was the possibility that the inflation trend would worsen. It does not appear that this is happening at this point. However, we have yet to see lower rates of core inflation, and I'm sensitive to the fact that core measures of inflation are being held up by the contribution to owners' equivalent rent from the rising rents and falling utility bills. Although more-stable energy prices will make the latter effect go away, it's not clear that the rent part of the picture will quickly fade, as rents continue to converge toward still high housing prices. When we look at the distribution of prices in the CPI, excluding energy, food, and owners' equivalent rent, prices seem to be either rising rapidly or falling. There isn't much in the middle, and that makes the underlying movements in the inflation trend hard to interpret.

It seems to me that the key risk on the real side of the economy has been that the housing market would decline much faster and more deeply than we had forecast and that the effect on consumption spending would be greater than we anticipated. So far, as others have commented, the collateral effect on consumption appears to have been contained. Furthermore, we expected

that other forms of spending would hold up as the housing sector slumped, and those expectations appear to be on track for now. I recognize that we're not out of the woods yet, but the downside risks to the real economy appear somewhat more benign than they did at both the August and the September meetings. In regard to the inflation risks, the probability of accelerating inflation has decreased, in my opinion, but the risk that inflation will remain higher than I personally desire hasn't really changed. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Mr. Chairman, I'll start with the District this time, and I will tell you that conditions in the District remain generally good. Energy activity remains strong, both in the traditional sectors, such as gas, oil, and coal, and in our new sector called ethanol. [Laughter] They are booming, I'm afraid. Despite the recent decline in energy prices, we are not yet hearing, in talking to different producers in the region, about any significant pullback in energy production. In part, this situation reflects a prevailing view right now among those producers that the weakness in energy prices is likely to be temporary. However, if energy prices remain at current levels or move lower at a sustained rate, I think we will then see some pullback in retail activity and so forth—more than we've seen so far.

In other areas of the District economy, we saw some softening in manufacturing activity in the third quarter, but our manufacturing survey shows that businesses remain mostly optimistic about future hiring and capital expenditure plans. Housing activity has certainly slowed across the District. However, we have received few reports of unusual weakness in our recent meetings with directors and economic advisory council members. So it is slowing but shows no sign of collapse, at this point anyway. We have also seen, with the decline in energy prices, strengthening in District retail sales activity and a sharp rebound in expectations for retail

activity in the fourth quarter—except for domestic auto sales. Labor markets remain firm across the District. Unemployment rates are low, and our directors and other contacts continue to report shortages of skilled labor across the District. District agricultural conditions remain rather mixed. Drought continues to affect much of the western part of our region. However, livestock and crop prices have been supported by strong world demand and lower supply, so those farmers who are able to bring in a crop are doing quite well.

Turning to the national economy, I think that the recent decline in energy prices will provide important support to the near-term outlook. Currently, I see second-half growth of around 2 percent, rebounding to between 2½ and 3 percent as we get into next year. Generally speaking, I am more optimistic than the Greenbook, both in the near term and for the next year. Indeed, with the current financial conditions that others have talked about, I don't envision the pullback in consumer spending and business investment spending that the Greenbook has projected at this point.

One area that is worth discussion—and Dave talked about it a bit in responding to a question—is the employment outlook, an area for which the Greenbook continues to have, as Dave said, a different perspective. Although demographic forces will clearly work in the direction of slower labor force growth in the coming years, I'm not as convinced that the slowdown will be as sharp or as sudden as the Greenbook suggests right now. I say that because I want to be cautious about viewing the recent slowing in monthly employment growth as being driven by these demographic factors. I believe the recent slowing in employment largely reflects some employer caution about the economic outlook, combined with the effects of weakness in housing and retail sales. Support for this view can be found in the recent slowing of growth in temporary help that has been reported to us. Should the economic growth pick up, as I

anticipate, we should begin to see some stronger employment numbers as we get into next year. As to the effects of demographics—again, I think they are going to play a very important part, but another significant factor to keep in mind is the educational composition of the labor force and the skills composition as we move forward in terms of labor demand, because that's the shortage we're always hearing about.

Now, returning to the near-term outlook, the recent decline in energy prices has helped to counter the effects of housing weaknesses. Consequently, the downside risk to the outlook has diminished somewhat. However, because we have not necessarily seen the bottom of the housing market, I do believe that that is an important downside risk to the economy.

Finally, let me share some of my perspective on the inflation outlook. My overall views on inflation have not changed materially since the last meeting. I continue to expect core CPI inflation to moderate from about 2.8 percent to about 2.5 percent next year and, similarly, core PCE inflation to moderate from about 2.3 percent to 2.1 percent. A significant fall in prices for oil and gasoline and natural gas in recent weeks has already begun to show through to overall inflation. I believe this is a positive development in helping to ensure that inflation expectations remain anchored and perhaps in helping to moderate core inflation next year. Although the decline in energy prices has reduced the upside risk to inflation somewhat, I agree with others that core inflation does remain too high, and I think we have to keep that in mind as we consider our policy options. Thank you.

CHAIRMAN BERNANKE. Thank you. First Vice President Barron.

MR. BARRON. Thank you, Mr. Chairman. Data releases and reports we have gathered over the intermeeting period do not indicate much change since the Committee last met, so far as the Sixth District is concerned. Overall growth has been moderate, with the index of District

economic activity showing a year-over-year increase of about 2.7 percent, and reports of activity varied considerably among sectors of the District economy. Retail sales have been mixed, and the outlook for tourism is reasonably optimistic. Auto sales remain sluggish, and the housing market—even beyond Florida, where both prices and sales have declined significantly—continues to show additional signs of some slowing. On the positive side, construction is shifting somewhat from residential to commercial. However, the lack of availability and the high cost of home and business insurance in Florida and along the Gulf Coast is a serious concern for our region. Manufacturing activity appears stable. Prices of some commodities are reported lower. Although gasoline prices are lower, fuel surcharges remain in place. As in the national economy, the slowdown in housing and moderation in overall activity have shown little signs of spilling over into the labor market.

Employment gains through September softened somewhat. However, all states in the District, except Georgia, added jobs, and together accounted for 20,000 of the nation's 51,000 jobs added during the month. The overall unemployment rate in the District, accordingly, moved down to 3.9 percent. Shortages of skilled labor continue to be reported in some areas, and overall labor quality, as Tom Hoenig noted, continues to be a problem, both of which I interpret as indicating a relatively firm labor market. We had a meeting this past week of our Advisory Council on Small Business, Agriculture, and Labor. Nearly to a person, participants reported things were good—not great but good—and the common problem was finding qualified workers willing to work. Most council members were willing to hire if they found the right people, but at the same time, they would forgo expanding their businesses if it meant hiring individuals who were less than qualified. One member from the construction sector noted that an individual walking around a job site with a piece of pipe, without doing anything else, would fully meet the

requirements for continued employment—that is, they were carrying something, and they were moving. [Laughter]

Concerning the national economy, opinions differ as to how much of a slowdown we will see this quarter and how long it will last. Most professional forecasters, as well as our own in-house models, suggest that growth will slow in the third quarter and then gradually accelerate thereafter. On the positive side, the labor market is very healthy. Corporate earnings continue to be healthy, business investment is supportive, and equity markets not only are at record highs but show no signs of letting up. At the same time, our headline inflation has come down, in the most part because of the decline in energy prices. Core inflation, especially in the service price component, continues to drift upward. Further, it's not clear that the energy price increases have played a major role in explaining the increase in core inflation, so it may be problematic to assume that the recent decline will provide a significant downward impetus to core inflation, at least in the near term. Federal funds futures prices, the TIPS spread, and inflation expectations seem to be saying that the Fed's credibility remains intact and are consistent with the belief that the Committee will get policy right, rather than signaling that slower growth is ahead in the foreseeable future. Thank you.

CHAIRMAN BERNANKE. That reminds me of the Navy saying: "If it stands still, paint it. If it moves, salute it." [Laughter] President Fisher.

MR. FISHER. Mr. Chairman, at our last meeting I engaged in a little Texas brag. I mentioned that the employment growth rate in our District was twice that of the national average. Then I read in the pre-briefing for the Board last night the penultimate sentence, which had a wonderful three-word phrase—"Humility is required." So let me report that economic growth in our District has slowed somewhat, and I want to put the "somewhat" in perspective. We redid the

numbers of our first-quarter real GDP growth. Growth of the state real gross product for the first quarter was 9 percent for the Eleventh District. So it's not a great wonder that it is slowing—it is slowing down from too torrid a pace. But our housing sector is still sweet—perhaps the only spot left in the country—particularly in the Houston area. We actually are building a new auto plant, President Moskow, a Toyota plant in San Antonio, which is getting an inordinate amount of attention. The exports from our state are growing at a monthly rate annualized at 45 percent, and Texas is now the largest exporting state in the nation. So from the standpoint of economic growth, even as I am trying to be humble, the District is doing exceedingly well.

The only consistently sour note that we hear is what you have heard around this table—and just now from First Vice President Barron—that we have continued reports of shortages of skilled and unskilled labor, from chemical engineers to school teachers to bank tellers and even to hotel housekeeping staff. So we have a significant problem in terms of labor shortages—skilled, semi-skilled, and now, increasingly, unskilled. To put some numbers on this, we have a contact who has surveyed fifty plants on the Gulf Coast for the price of welders. In eight months, the price for a welder has gone from \$19 an hour to \$25 an hour. You have to pay them a bonus of \$100 when they show up, and you have to pay them a completion bonus as well. The bottom line is that in the Eleventh District we're behaving as though we were a full-employment economy.

In the rest of my comments, I'd like to emphasize not my District but our views on the U.S. and the global economies, particularly the U.S. economy. I want to go back to your concluding remarks, Mr. Chairman, at the last meeting, when you reminded us that, if we believe we need to have output below potential to help address inflation pressures, it's a delicate operation, and we may have a very narrow channel to navigate as we go forward—just to keep with your naval analogy of a few seconds ago. This summer I sailed the Corinth Canal, which is so narrow that at times you feel



you can reach out and touch both sides. Even though I was on vacation, I was actually thinking of one side as the shoals of slow economic growth—almost recessionary growth, which seems to be what the Greenbook is forecasting at least for the third quarter, and the risk that seems to be out there—and of the other side as the shoals of inflation.

From the 27 or 28 CEOs and CFOs to whom I spoke in preparing for this meeting, as I always do, I do hear reports of a slowdown. I talked to two of the Big Five housebuilders this time. They are cutting back significantly. Let me give you some numbers. For example, Centex owns 109,000 lots outright and has 54,000 lots under hard option and 80,000 lots under soft option, as they call it. They've canceled 25 percent of their hard options. That is \$85 million worth of properties. Hovnanian is walking away from \$100 million worth of hard option properties. The effort there is to cut back so that what was a two-month leading supply has now become a three-month leading supply. You can see how the dynamics are beginning to work. They're moving on price, but they are also trying to shut down their inventory and are taking very quick action. That is a depressing factor. One of the truck dealers I talked with, Rush Enterprises, has about \$2.7 billion a year in sales. I believe they are the largest in the country; they are nationwide. They are reporting that Christmas retail activity seems to be backing up; in other words, it is slower than it was in previous years. This is an operator with 41 years of experience. They are also building their inventory, particularly in the coastal areas, with the heavy trucks that are going to be used for home construction. The book-to-bill ratio for Texas Instruments has fallen below 1; it is the lowest since 2000. And if you read the newspapers, you will see that the airlines are offering very deep discounts and for longer periods than before. So there seems to be a slowdown in activity.

With that said, when you talk to the rails, there is a diminution of growth, perhaps 1 percent third quarter over second quarter, and if you talk to UPS, as I reported last time, you're still seeing

some rather robust reports of economic growth of 2 to 3 percent. I think the best way to summarize the economy is, as President Moskow said earlier, that although there are weak signs, the economy is still robust. The chairman and CEO of Cadbury-Schweppes said, "I keep looking and listening, but I'm just not seeing what everybody tells me is going to happen." Again, as I reported last time, the CEO of EDS, who is an experienced businessman, said, "It's a funny period. Everybody is prepared to be bearish, but it's simply not materializing." So, David, from an economic standpoint, both from the anecdotal evidence and our own economic modeling, we don't quite accept the Greenbook's forecast of the kind of slowdown that you're expecting for the third quarter or for the second half.

There are positive benefits, and the benefits are, of course, with price pressure abatement. My favorite anecdotal example, by the way, comes from globalization at work, Karen. Interestingly, the CEO of Fluor, who is one of my contacts, reports that when they bid for the Bay Bridge construction, their bid on U.S. steel prices was rejected as being too expensive. They went back and bid based on what they could buy steel from China for, and the bid was accepted. Canadian steel now sells for 25 percent less than U.S. steel, and Chinese steel is being dumped into this market at a price 40 percent lower than Canadian steel. From the standpoint of raw materials and energy, you have seen price pressure abatement. But from businessperson after businessperson, we still hear the same reports, Mr. Chairman, that we hear in our District and that you've heard around this table, which is of significant price pressures stemming from labor. As I mentioned earlier, it is not just skilled labor; it is now semi-skilled labor such as truck drivers and welders. Increasingly shortages are being reported, throughout our District and the rest of the country.

So I would summarize by agreeing with President Moskow in that we in the Eleventh District find the Greenbook's projection of economic growth to be too pessimistic. Although price

pressures have abated somewhat, we know by our measure—the trimmed-mean PCE, off of which we key our view of the economy—that the three-month rate is still running at 2.9 percent and the twelve-month rate is running at 2.7 percent. I would argue as we navigate this narrow channel, Mr. Chairman, whether it's the channel you describe or the Corinth Canal, that I would be more careful of the inflationary shoals than of the risk of excessive slowdown of growth. Thank you.

CHAIRMAN BERNANKE. President Hoenig.

MR. HOENIG. Richard, clarify for me. You said that some of your national contacts were seeing a slowdown in the book of business. Is that the minority of the contacts? I'm not quite sure I know what you were conveying.

MR. FISHER. The question that I put to each contact was to compare the third quarter with the second quarter. I was trying to get a feel because I'm quite concerned about our staff analysis and the Greenbook's analysis of the dramatic slowdown to 1 percent in third-quarter growth. So the answer is, yes, there is a slowdown, but it is not now of the severity that our staff projection seems to indicate. But I do want to note that there is some slowdown taking place.

MR. HOENIG. As to your reference to the trucking company—one of our trucking company contacts indicated that business is still good. Their bookings out have been reduced from three weeks to about four or five days. So they've seen a slowdown, but they're still busy. They still have business coming in.

MR. FISHER. Part of that, by the way, is in the average fleet of, say, Class A trucks, which are the big ones. The average fleet age is now fourteen months; the normal fleet age is twenty-two months. Part of that has to do with all of these Environmental Protection Agency changes that keep being mandated. So you have to sort out that distortion from economic activity. But the point I was

reporting is that the utilization of those trucks in terms of carrying Christmas inventory appears to have slowed and is not running at the pace that it was in previous years.

MR. HOENIG. I agree. Thank you.

CHAIRMAN BERNANKE. President Minehan, did you have something?

MS. MINEHAN. Yes. I just wanted to add something that I forgot to mention earlier. President Fisher's comments reminded me of it. Whether you look at the KMV data on expected-default frequencies for the five major homebuilders or at the Dow Jones home construction index and the stock prices for the top five homebuilders, none of them seems to be indicating a major problem. Now, the expected-default frequency, which again is driven from stock prices, may certainly be above the rest of U.S. industry, but by no means is it even at any kind of historically medium position, let alone high position, and there has been a recent uptrend in the Dow Jones home construction index overall. So that's another bit of the data that I was using, and others may be using as well, to suggest that maybe things won't get as bad as the worst of our projections in terms of homebuilding.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. Mr. Chairman, very quickly—I asked two of the big homebuilders to whom I spoke about that very phenomenon. Their answer was very interesting. They have strong balance sheets. One of them said, “I can feel the private equity shark swimming around my feet.” In fact, there is rumor of one sizable deal that has been proposed—I haven't been able to figure out what it is—to take one of them entirely private. So some of the buttressing, President Minehan, is coming from significant amounts of liquidity in the system.

MS. MINEHAN. Private equity interest, yes. But not all five of them, and they all point in the same direction.

CHAIRMAN BERNANKE. President Stern.

MR. STERN. Thank you, Mr. Chairman. We had a meeting at the Bank last week with representatives from the housing industry in the Twin Cities, including builders, brokers, and lenders, and most of these participants operate nationally. In fact, one of the first you mentioned, Richard, was there. Some of these firms are in nonresidential development and construction as well. The bottom line of the meeting, I would say, was that the comments overall track pretty well with the Greenbook forecast of housing activity—that is, both a further and a prolonged slump in housing. Let me just give you a few of the specifics. They reported, as we know, that sales of new homes have declined dramatically and prices of new homes are going down with sales, also dramatically. Retail brokerages are starting to contract in terms of both number of offices and number of brokers. It was reported that so-called investors have disappeared entirely from many markets and that inventories of unsold homes are rising and the extent of the increase may be understated by the published data. There was little expectation among this group of improvement in housing in the next several months at least, and I would say not a whole heck of a lot of confidence that there was improvement in store even out beyond that, maybe as you get later into '07. In contrast, and on a somewhat more positive note, the people who are also in nonresidential construction—in particular, office and retail development—thought that the outlook was promising, indeed positive, and are seeing a lot of activity in that business.

The housing situation notwithstanding, I remain somewhat more optimistic about our prospects for real growth both in '07 and in '08 than the Greenbook. Apparently my assessment of the implications of the sustained increase in income, of the run-up in equity values, and of the decline in energy prices is just more positive than the Greenbook's, and that's how I arrive at a somewhat more optimistic assessment. I continue to think that core inflation will diminish modestly

over this period. So my overall view of the outlook really has changed very little since the last meeting.

CHAIRMAN BERNANKE. Thank you. President Poole.

MR. POOLE. Thank you, Mr. Chairman. Let me start by saying that I think the Greenbook outlook is a very good central tendency outlook. I am going to make some comments that are more on the downside of that, which come from hunches and gut instinct. I want to emphasize that I don't want to make policy on the basis of gut instinct, but I think it helps to keep an open mind about some of the things that might be going on.

First, on the positive side, my UPS contact says that he is expecting a peak season with a glut of volume and not enough lift. They're going to have to move express business over to trucks. So if you're counting on getting a last minute present at Christmastime, I urge you to order a little earlier than you might otherwise. That's his expectation. On the labor side, UPS has some fairly big increases coming next year as a consequence of recent contracts they signed. They had a long negotiation with pilots, but on the ground side, obviously the less skilled workers, they're expecting about 3½ percent compensation, very much in line with a normal situation.

My Wal-Mart contact said that they have not experienced the pickup in sales that they would have anticipated from the decline in energy prices. They had expected an increase of about 65 basis points. They always measure their sales as same-store, year over year. They haven't seen that. They're going to be lucky to get 2 percent year-over-year in October. My contact says that weekly information suggests that October is slowing down week by week as we go through the month. Wal-Mart received a lot of attention recently in the press about their slowdown in building new stores next year. They probably had a lot more press than the actual size of the slowdown warrants. They are expecting to increase their square footage 7.6 percent in '07 compared with

8.4 percent in '06—so the slowdown is hardly gigantic. Construction costs this year are rising 17 percent; next year they're anticipating 11 to 12 percent. So there is a slowdown in the increase, but 11 to 12 percent is still a pretty big increase in construction costs.

My contact in the trucking industry says—and this may make a little more explicit what Richard Fisher was saying—that things in the industry are continuing to slow down. He says it's the first time in his experience—and he's been with the company twenty years or more—that the seasonal peak has not yet started. Ordinarily the seasonal peak in shipping for the holiday shopping season would have started. It just hasn't started, and I think he said they're running—I forget exactly what the number was—8 percent below a year ago. (Incidentally, one thing that I was thinking when Richard was talking was that sometimes the business people have a hard time doing the seasonal adjustment, so when you compare the third quarter with the second quarter, they may not be seeing a seasonally adjusted slowdown because the volume is bigger in the third than in the second.) My trucking industry contact says that the slower business seems pretty evenly distributed geographically—perhaps a greater softness in the Southeast than in other parts of the country. It is more concentrated in home improvement—I think Home Depot is one of the big customers—and probably autos, but the softness is spread fairly generally across commodity categories.

We've also spent a lot of time talking recently with contacts in the housing industry. The word that we're getting is that some of the smaller and even regional builders have perhaps six months, and if they don't see a pickup, they're going to be filing for bankruptcy. They are very, very hard pressed. A lot of them overbuilt. They are stuck with a big inventory. They have the carrying costs of that inventory, and laying off workers doesn't solve that problem. They may bring the new construction down very low, but it doesn't solve the problem of what to do with

the unsold inventory. So without a pickup in housing, I think we can anticipate some bankruptcy filings in that area.

People around the table here and, I think, generally have been treating oil price declines as an unambiguous positive, and I would like to raise a caution flag on that. I remember from my first year in graduate school Milton Friedman pounding into me that a price never declines without a shift in either the supply curve or the demand curve. Over and over again, that's what Friedman would say. Now, on the supply side in oil, as far as I know, there have been no gigantic new supplies that have come on the market, and the optimistic view on oil is that last winter and spring or starting in the fall perhaps a year ago, there was maybe a \$10 to \$20 premium built into crude on the basis of geopolitical and weather uncertainties. So a possibility is that prices in the mid to upper seventies were above what was clearing current supply and demand. Inventories accumulated—we know that there has been a big inventory accumulation in the United States for sure—and eventually, with nothing really bad happening on the geopolitical front and with no hurricanes hitting, the prices dropped back down. It seems to me that is the optimistic way of looking at what's happened to oil prices. But I think we should not rule out the possibility that some fundamental weakness in world demand is showing up in the demand for energy and that might have something to do with the softness. I take that as a hunch, not by any means as a certainty; but I think we ought to be open to that possibility.

Clearly, the yield curve has been inverted for quite a few months. The market seems to be quite persistent in believing that some time next year there are going to be some declines in short-term interest rates, presumably because of some combination of slower real growth and more-benign inflation. Possibly it's not all expectations related. It may simply be that the underlying demand for funds is softening—that's surely true in the mortgage and housing



industry—and that is what's driving yields down. So I think that it's important to keep an open mind to the possibility that a more fundamental slowing than we see in the current numbers is taking place and to make sure that we don't dismiss incoming data and say it can't really be happening. Thank you.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. Five weeks have passed since our last FOMC meeting, and not surprisingly the outlook does not appear to have changed in any fundamental way. Recent data bearing on the near-term situation point to noticeably slower growth in the third quarter than we anticipated at our last meeting. However, the Greenbook has revised up its projection for growth during the current and next few quarters so that the overall effect on slack next year is roughly neutral. This forecast strikes me as plausible, but there are few data thus far to bear it out. Meanwhile, measures of consumer price inflation remain uncomfortably high, although the latest readings have been very slightly better.

With regard to the pace of economic activity, there's uncertainty in all directions. In fact, we seem to have a bimodal economy with a couple of weak sectors, and the rest of the economy doing just fine. Those two weak sectors are, of course, housing and domestic auto production. Autos seem likely to have only a short-lived effect. In the case of housing, we agree with the Greenbook assessment of housing activity and find it quite consistent with the reports of our contacts in this sector. Besides the falloff in activity, house-price increases have also slowed markedly. The Case-Shiller house-price index has been flat in recent months, and futures on this index show outright declines next year. However, equity valuations for homebuilders, as Cathy mentioned, have risen moderately in the past couple of months, following large declines over the previous year, and we interpret that as providing some indication that the expected future path of

home prices has at least stopped deteriorating. Of course, housing is a relatively small sector of the economy, and its decline should be self-correcting. So the bigger danger is that weakness in house prices could spread to overall consumption through wealth effects. This development would deepen and extend economic weakness, potentially touching off a nonlinear type of downward dynamic that could trigger a recession. But so far at least, there are no signs of such spillovers. Consumption spending seems on track for healthy growth.

Nonetheless, the growth estimate for the third quarter begins with a 1 and just barely. Any time a forecast is that low, it's reasonable to consider the possibility that the economy could enter recession. So for this reason, we, like the Board's staff, took a careful look at various approaches to assess this issue, including yield-curve-based models, past forecast errors, leading indicator models, and surveys. Our bottom line is that we agree with the basic results reported in Monday's nonfinancial briefing. The highest probability of recession that we found, around 40 percent, was obtained from a model developed by a Board staff member. The model includes the slope of the yield curve and the level of the funds rate. An issue with this result is that long-term rates may currently be low, hence the yield curve inverted, for unusual and not very well understood reasons having to do with the risk premium. Estimates from the other approaches came in with lower probabilities. Finally, other financial developments that could presage future economic performance, like stock market movements and risk spreads, suggest some optimism on the part of financial market participants.

So our sense is that, except for housing and autos, the economy appears to be doing quite well. Indeed, the recent rather sharp drop in energy prices could boost consumption spending even more than assumed in the Greenbook. While this is a possibility, it seems more likely to

me that households ran down their savings to fill their gas tanks when gas prices rose and are, therefore, likely to use their recent savings at the pump to bolster their finances, at least partly.

Overall, under the assumption of an unchanged funds rate, our forecast shows a beautiful soft landing, with real GDP growing at a moderately below-trend pace for a few more quarters and homing in near trend thereafter. But I must admit that we got this forecast essentially by averaging the strong and weak sides of the economy. I think that way of proceeding is reasonable, and I hope the landing happens that way. But I acknowledge there is plenty of risk. We may end up instead with either the strong or the weak side dominating the outcome. For example, if the housing market decline does not spread significantly to consumption, we could end up with a strong economy in fairly short order. However, if it does spread, the slowdown could last quite a while. Scenarios like this are nicely spelled out in the alternative simulations in the Greenbook.

Which way things go is a key issue, given that we're in the vicinity of full employment. The desired soft landing depends on growth remaining below trend long enough to offset the moderate amount of excess demand that appears to be in the economy so that inflation can trend gradually lower. The slight drop in unemployment, to 4.6 percent, in September did not help in that regard, and I should note that recent comments by our head office directors almost uniformly supported the idea that labor markets, especially for skilled workers, are tight. However, we do expect the unemployment rate to edge higher over the next year in response to sluggish growth.

Our forecast for core consumer inflation comes down a bit faster than foreseen by the Greenbook. We have core PCE price inflation edging down from just under 2½ percent this year to just over 2 percent in 2007 and see a good chance that it may fall a bit below 2 percent in the following year. We see the relief on energy prices as helpful, although we keep trying to resist

any temptation to overestimate the extent to which past energy price pass-through has been boosting core inflation. Inflation also may benefit from an unwinding of the earlier strong pressures on rents. Finally, as in the discussion we had earlier about the alternative Greenbook scenario, we think inflation may have become less persistent over the past decade, and this is one reason that we're a bit more optimistic than the Greenbook about the possible degree of disinflation over the next couple of years. But on balance, I have to admit we don't have a perfect understanding of why inflation has been so high over the past few years, and so I try to remain humble, as always, in my predictions.

My bottom line is this. I see a non-negligible chance that the downside risks to the economy, emanating especially from housing, could produce a recession in coming quarters, but there's a very good chance that the spillovers will be sufficiently modest that the economy will avoid a recession. I also see a significant chance that growth could modestly exceed potential. In that sense, the overall risks to the outlook for real GDP growth could be characterized as balanced. In addition, I see quite a bit of uncertainty about inflation going forward with the risks to my forecast probably being a bit to the high side.

CHAIRMAN BERNANKE. Thank you. It's just a little after 4:00. Why don't we take a coffee break and come back at 4:20?

[Coffee break]

CHAIRMAN BERNANKE. Mr. Stockton.

MR. STOCKTON. It's amazing how great my answers are to your questions at 3 o'clock in the morning after an FOMC meeting. [Laughter] I want to address just a couple of things that came up during the question-and-answer session.

First, on the issue that President Yellen raised about the expectational channel. That's a pretty small piece of the story in the way that these model simulations work, so I don't think you should worry too much that it is being a significant factor. It is a small factor slowing the pace of disinflation. The model guys tell me that the dollar channel is probably the more important factor there.

Second, in response to President Moskow's question about house-price modeling, I should have said we do have several models of house-price determination, none of which we think are very good. [Laughter] One is an error-correction model that takes seriously the notion that, when house prices are very high relative to rents, there's a correction that will bring the price-rent ratio back to the historical average, and we estimate the speed of that correction. That model taken seriously would suggest outright house-price declines in 2007 and 2008. We also have a simpler model based on momentum. That model suggests a bit of deceleration but nowhere near the amount of deceleration suggested by the error-correction model. Our forecast cuts between those two simply as an indication of our ignorance about which of those models might be best at capturing the current situation.

Third, in response to President Pianalto's question, besides the notion that the less-persistence scenario could reflect greater credibility anchoring monetary policy, some structural changes could be taking place in the economy in terms of greater flexibility of labor markets and maybe greater price flexibility as well. I don't think that's an unreasonable hypothesis. One could think about and be surprised at the extent to which workers have taken a significant hit to their real wage this time without trying to recoup any of it through higher nominal wages. That may indicate that labor markets and maybe product markets are changing in a way that will make the overall inflation adjustment more rapid than the inertia models that

underlie our staff projections. I hope those responses are a little clearer. I'll sleep better tonight.

[Laughter] Thank you.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. The Fifth District survey for October just released today shows manufacturing flattening out after a run-up last month, though expectations remain upbeat. Services firms note solid increases in revenues, and overall District job growth remains strong. Among retailers, big-ticket sales were softer, and housing-related sales slowed further; but with other retailers, the picture brightened, with sales and traffic notably stronger. The housing sector continues to slow, with sales weakening further in the D.C. area and modest price reductions occurring in other large markets. Some cities in the Carolinas, however, continue to report modest increases in home sales prices and even permits, and in many locations, activity varies significantly across different price ranges. District labor markets remain tight, and our surveys indicate that expectations are for some additional wage pressures in the next six months. This commentary includes the now-usual reports of shortages of particular skills. Our price measures moderated some, but they remain elevated.

The national outlook has changed only marginally in the past five weeks. At our last few meetings, we have seen the staff mark down their forecast for second-half growth as the pace of the contraction in housing activity has become clear. The information that has come in over the past several weeks does not suggest any steepening in the rate of decline, and if anything, there are scattered signs suggesting that we might be getting close to the bottom. Except for housing, the economy still appears to be in good shape. Consumer spending is holding up well. Employment is tracking labor force growth. Commercial construction is fairly robust, and business investment spending continues to grow. So we're still not seeing any major spillovers

from the housing market to other economic sectors. Housing is certainly going to subtract from headline growth over the next couple of quarters, but I expect GDP growth to return to close to potential at some point next year, and I remain more optimistic than the staff about when that will occur. There is a risk that output growth will come in lower than I anticipate because of a more severe deterioration of the housing markets or more substantial spillover effects on other spending categories. Although it's certainly too early to rule this out, I think the probability of such an outcome has receded in recent weeks. So my outlook for real growth is about the same as it was in September with, if anything, a tad less downside risk.

The inflation outlook has not improved since our last meeting. The September core CPI reading was 2.9 at an annual rate, identical to the August reading, and core PCE inflation for September is estimated at an annual rate of about 2.1 percent, I think. I grant that three-month core PCE inflation has come down off its May peak of close to 3 percent. I do take some comfort in the fact that core inflation did not remain so high, but that measure of inflation has been right about 2¼ percent for three straight months. The Greenbook forecast has it stepping up to 2.4 percent for the next six months and falling below 2.2 percent only in the second quarter of 2008. So three-month core PCE inflation is now as low as it gets for the next year and a half in the Greenbook forecast, and at the end of 2008, core inflation will have been above 2 percent for five straight years.

I have my doubts about the prospects for even the modest decline described in the Greenbook. The notion that slowing real growth will bring inflation down much has already been heavily discounted around this table—and rightly so, in my view, given the tenuous status of the relationship between real gaps and inflation. The recent fall in energy prices may help, but relying on tame energy prices is problematic, I think. It would encourage the public to believe

that we will allow core inflation to rise whenever energy prices surge. That belief is, for me, the leading hypothesis explaining the run-ups in core inflation that we saw last fall and earlier this year. We are likely to see some significant swings in energy prices in the years ahead. So help from this direction is by no means certain. More broadly, I believe we should be leery of letting a relative price move core inflation around.

There was a lot of discussion at our last meeting about the state of inflation expectations, and a number of people pointed to evidence that market participants did not seem to believe we intend to bring inflation down to the center of the 1 to 2 percent range. This is confirmed by the Bluebook, which provides a very useful compilation this time from various sources of market expectations for core PCE inflation, and they are all clustered around 2¼ percent. If the Greenbook forecast is realized and core inflation gradually comes down to 2.1 percent over the next two years, it's hard to believe these expectations would fall much. So with core inflation running around 2¼ percent and not likely to come down much soon and with expectations apparently settled at about the same rate, I'm deeply concerned about inflation. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman Geithner.

VICE CHAIRMAN GEITHNER. Thank you, Mr. Chairman. Our view of the national outlook hasn't changed much since September. If monetary policy follows the path that's laid out in the Greenbook, and it's flat for the next few quarters, then we expect growth to return to a level close to 3 percent in '07 and for inflation to moderate gradually from current levels. However, we still face the basic tension in the forecast—the combination of relatively high core inflation today and an economy that has slowed significantly below trend—and we still face the same basic questions: Will inflation moderate enough and soon enough to keep inflation expectations reasonably stable at reasonably low levels? Will weakness spread beyond housing



and cumulate? Relative to September, we see somewhat less downside risk to growth and somewhat less upside risk to inflation, but as in September, I think inflation risks should remain our predominant concern.

Relative to the Greenbook, we expect somewhat faster growth in '07, but we have a higher estimate of potential. The difference is really mostly about hours and trend labor force growth. We expect more moderation in core PCE and expect it to fall just below 2 percent in '07, but this difference is mostly the result of different assumptions about persistence. With these exceptions, our basic story about the contour of the expansion is fairly close to the Greenbook, and the implications for monetary policy are similar.

The markets do seem relatively positive, a little more optimistic about the near-term outlook. Equity prices, credit spreads, and market interest rates all reflect somewhat less concern about both recession and inflation risks. Some of this, however, is probably the result of the exceptional factors supporting what the markets call liquidity. What is liquidity, and what's behind it? I don't know that we have a good answer to that. Most people would cite a combination of the facts that real interest rates are fairly low in much of the world still, that reserve accumulation by the countries that shadow the dollar is still quite large, that a big energy-price windfall is producing demand for financial assets, particularly in dollars, and that there is confidence in the willingness and ability of the central bank, particularly this central bank, to save the world from any significant risk of a recession. I don't think all of this, therefore, is the result simply of confidence about fundamentals, so we shouldn't take too much reassurance. But it still is a somewhat more positive constellation of asset prices, of market views about the outlook.

Someone wrote this week that the fog over the outlook has lifted. I don't think that's quite right. It's true that the economy still looks pretty good except for housing, and I do think it's fair to say that core inflation is moderating and that expectations are behaving in ways that should be pretty reassuring to us. But it is too soon to be confident that inflation is going to moderate sufficiently soon enough with the path of monetary policy priced into markets today, and it is too soon to be confident also that the weakness we see in housing, in particular, won't spread and won't cumulate. So I think that overall the balance of risks hasn't changed dramatically, and as in September, I still view the inflation risk as the predominant concern of the Committee.

CHAIRMAN BERNANKE. Thank you. Governor Kohn

MR. KOHN. Thank you, Mr. Chairman. The Committee's focus has been on encouraging a gradual abatement of core inflation, and I think the limited evidence we've gotten since the last meeting is consistent with this outcome. The price data themselves show some signs of deceleration of core inflation on a three-month basis from the very high levels of last spring and summer, though the rates are still elevated. A further decline in energy prices should help to keep inflation expectations down and will take a little pressure off business costs and core inflation even if pass-throughs are fairly small. As expected, the rent-of-shelter component has been increasing less rapidly, supporting the projection that, in a soft housing market with overhangs of unsold housing units, this component will not be boosting measured inflation rates very much. Inflation expectations as derived from financial market quotes remain at the lower levels reached earlier this fall. As the Bluebook notes, the exact level of these expectations is really impossible to tease out of the data; and although they may be a bit higher than we would

like, they do look lower than the recent twelve-month inflation rates and, at these levels, should exert some downward gravitational pull on realized inflation.

The economy appears to be running modestly below the rate of growth of its potential, and this should relieve pressure on labor and product markets. How far the economy is running below potential in an underlying sense is uncertain. I suspect it is not as weak as the estimated third-quarter GDP number but is somewhat softer than the labor market indicators, which show no slackening in the pace of demand or decline in resource utilization. I base this conclusion in part on the data and projections of final domestic and total demand, which the Greenbook has averaging in the neighborhood of 2 percent in the second half of the year. Industrial production was weak in August and September, pulled down by the ongoing inventory corrections in housing and autos, and this reinforced my sense that, at least for a time, the economy is growing a bit below the rate of growth of its potential. Going forward, I think a projection of economic growth gradually recovering next year as the drag from housing abates is reasonable, with growth supported by favorable financial conditions and lower energy prices. How quickly it returns to potential is an open question. Though other forms of spending have proven resilient to date, I agree with the staff analysis that some spillovers on consumption and investment from the weakness in housing and in housing wealth are likely to restrain growth at least a little next year. I also see that the spending risk is still pointed somewhat to the downside, although less so than at the last meeting. To be sure, the recent signs are somewhat reassuring that the housing market isn't weakening faster than expected. Still, in the staff forecast the housing market is left with a relatively high level of inventory at the end of 2008, and prices are still elevated relative to rents, suggesting the possibility of greater declines in activity and prices. In addition, equity prices are vulnerable to disappointing earnings as labor costs rise even gradually.

The economy is most likely to grow a little below its potential for a while and inflation to trend gradually lower. All in all, this is a pretty good outcome following the earlier oil price shock and rise in core inflation and housing market correction. With demand outside of housing as resilient as it has been and inflation as high as it has persisted, the extent and trajectory of the expected inflation trend is uncertain and should remain our focus. A failure of inflation to reverse the uptick of earlier this year before it becomes embedded in higher inflation expectations continues to be the main risk to good, sustained economic performance over time. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Bies.

MS. BIES. Thank you, Mr. Chairman. Well, again, as some of you have said, in five weeks we don't have a whole lot of new information. But I'm coming back and starting with housing again. As you know, that continues to be something I watch. Let me just make a few comments and give you recent feedback from some exams and dialogues with brokers that I'd like to share with you. Looking at both starts and permits, we all know that housing is continuing to soften in terms of construction, and we have also identified the increasing number of contract cancellations for new housing. Someone mentioned earlier the noise that we may be having around housing data, and I get this through some of the anecdotal conversations that I've had with folks. One topic was the inventory of existing housing for sale. I'm hearing from a couple of real estate brokers that people who may have wanted to sell their homes or may have put them up for sale are withdrawing them from the market. They don't need to move, and it isn't worthwhile for them to move if they don't get the price they want. I think the supply was possibly bigger than what we're really measuring, and so we're seeing some understating of

what desired house sales would be in terms of inventory. That's continuing; it is just beginning at this stage, at least in a couple of regions, according to folks with whom I've talked.

One of the challenges that we're faced with here is that—again, I try to look for the good news—in the housing purchase process, people file applications for mortgages very often before they qualify to buy the house. When you look at the Mortgage Bankers Association data on purchase mortgage applications, as I mentioned before, they dropped 20 percent from their peak of last summer, but in the past few months they have been leveling off. So if applications are a leading indicator, we may begin to see some moderation in housing purchases. However, the 20 percent drop in purchase mortgage applications means that mortgage brokers are earning a lot less income. If they don't close a transaction, most of them get no paycheck because three out of four mortgages are originated not in financial institutions but by independent brokers. We're beginning to see increasing evidence of this in terms of the quality of mortgages that are out there. We continue to track the mortgages that have vintages—in other words, that were originated—in 2005, and we are continuing to see that, as these mortgages age, the early delinquencies for these are greater than early delinquencies for similar-aged mortgages of earlier vintages, which implies a loosening of underwriting standards and more stress on the borrowers.

We are also seeing in a small way increased predatory activity with loans. Certain practices have been described to me lately with new products, such as the 2-28 mortgage, which is fixed for two years and then escalates and becomes an ARM tied to LIBOR in the third year. But don't worry—you can refinance it with the broker and bring your payment down and do it all over again. We're seeing those kinds of things—mortgages for which people are being qualified by brokers with no escrow account; all of a sudden taxes are due, and borrowers don't have the money for them. So predatory lending is rearing its head at the lower end of the scale,

and it's something we have to continue to watch for. However, before I leave housing, let me just say that the bottom line is that overall mortgage credit quality is still very, very strong.

We're seeing predatory lending only in pockets of the market.

I continue to believe that the rest of the economy—except for autos, I should add—is still very strong. Consumer spending is good, and business fixed investment is very sound. The moderation in energy prices and the growth in consumer income will continue to add support to the economy going forward. Jobless claims have been low and moving in a very narrow range the past few months. As several of you have mentioned, I'm hearing more concern by corporate executives about the inability to hire the talent they need to meet their business plans, and so I'm seeing more indication of tightness in labor markets.

Turning to inflation, as many of you have said, core inflation has moderated from the pace in the third quarter. But going forward in the Greenbook forecast, it is still showing significant persistence even though we think we will be growing, at least for a period, below potential. That concerns me because that level is higher than I'm comfortable with in the long run. We might have had some spillover effects from rising commodity and energy prices earlier on, but I was hoping at this point that, with the reversing, we would see more-positive spillover effects that would mitigate inflation. So I am very worried about inflation. At the same time, I know that negative spillover effects on growth due to the rapid decline in housing construction and the moderating house-price appreciation are risks, which we cannot dismiss, to growth; but on net I am still much more concerned about the persistence of inflation. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. My own views are quite consistent with what I expressed five weeks ago and with the central tendency of many of the speakers today—that is, a greater concern about inflation prospects than growth prospects. So I thought what I'd do is just give you maybe three or four perspectives on market activity in the intermeeting period and suggest to you what conclusions we can draw from them and what conclusions I'd hesitate to draw.

First, as we noted at the last meeting, the growth in the equity markets is all about earnings and not about multiples. As the markets record the eighteenth double-digit quarterly growth rate, with quarterly growth in the third quarter likely to exceed, on an annualized basis, the second quarter, on one level you would see reasons for earnings momentum and for more robustness than the Greenbook shows in the prospect for business fixed investment. Despite those headlines, I think the Greenbook probably has the general slowdown in business fixed investment and the general slowdown in manufacturing about right. Again, at some superficial level you would think that these stock prices would be juicing business activity—that animal spirits would be as high as they've ever been. But in fact, what we can say with some confidence is that historical models of cash and profits have done a poor job of indicating what the strength of business demand would be here. Although business demand has certainly picked up over this cycle, it appears not to have picked up as dramatically as a lot of the data might suggest.

So what does that mean? I think it means that there is generally still conservatism in board rooms, conservatism by CFOs. Although they have plenty of ammunition in terms of their access to capital markets and their cash balances, we'll likely see them use that only when it's clear that the economy has turned. If this soft landing followed by a gradual acceleration does

appear to be the most likely path, I would expect to see these companies put their feet on the accelerator a bit more and make sure that growth gets back to trend relatively quickly. But the idea that businesses are going to turbo-charge their way through this without hesitation appears to be less likely than the data would suggest.

Second, let me turn to the debt markets. There is a discussion among pundits about a tug of war going on between growth risks and inflation risks. As I look at the data in the debt markets, I must say that I don't see that tug of war. The only tug of war is really between a soft landing and a harder landing, under the view that inflation is almost assuredly going to be solved by the central bank or by exogenous factors. Again, a superficial conclusion would be, boy, the markets are not worried about inflation, and we should take great comfort in it. Rather, the thing that gives me the greatest pause is that, just as inflation is nowhere on the table in the capital markets now, it could quickly emerge; and it would not take much data, which all of us would consider to be relatively noisy and perhaps not overly valid, for inflation to become part of the discussion in the debt markets. That's something I think we have to prepare for. I suspect, as I think about the balance of this year, that another round of discussions in the capital markets about an inflation scare is quite possible.

The third issue is really one of short-term volatility, which I tend not to overreact to, but I do think this particular case is telling. Typically, several weeks after a quarter, the markets' assessment of that quarter's GDP ends up trending toward truth and ends up without a huge disparity as they get closer to and smarter about the underlying information. I have no reason to doubt our own staff's view that third-quarter GDP is likely to come in around 1 percent. Nonetheless, the markets' estimates are quite far away from that. Market estimates have, in fact, trended down, but I'd say the median estimate in the market is still in the high ones, maybe even



2 percent. So the question really is, come Friday, if the headline number posts the way that the staff suggests it will, what the market will say about that. My own view is that there will then be an immediate rush to judgment probably amplified to the downside in a political season like this. They will say, "Boy, the economy is really on the wrong track, and the economic landing is a very hard one." Whether that judgment dissipates as markets look forward and start to understand the reasons for the shortfall is a bit of a concern. Also, some in the marketplace may have the view that, if that landing is relatively hard and fast, the pace of economic growth will do our work for us on the inflation front. Obviously I don't think that view is shared by many of us around the table; in fact, there might be more work for us to do. It wouldn't surprise me if the markets didn't, at the end of this period, expect there to be a couple of rate cuts built into the first half of 2007, and I suspect we'll need to send Don back out there to give them another speech.

[Laughter]

CHAIRMAN BERNANKE. I second the motion. [Laughter]

MR. WARSH. What does all of this mean for the real economy? Again, I'd break it up into two pieces. First, in terms of a consumer reaction function, I think consumers are going to be very stubborn and very strong and are not going to be overly scared by a third-quarter GDP number that they don't really pay that much attention to. On a very fundamental level they are feeling much better about their prospects now than they have felt in some time, this is a function of some of the wage growth that we've seen and a function of oil prices and the unemployment rate. So I don't really worry that there will be any short or intermediate effect on the consumer. I think the Greenbook has consumer spending continuing in the fourth quarter at something like 3 percent. That's probably a very conservative estimate given the strength of some of those underlying fundamentals. Second, what's the effect of this on the real economy for businesses?

I'm more concerned about their reaction function. Despite the rather robust discussion in the business sector that I mentioned at the outset, I would expect them to be concerned. As they're thinking about their capital expenditures plans for 2007 and as they're doing their fiscal year-end meetings, on balance the concern and the discussion of a hard landing may well affect their ability to bet big and make big projects. So, again, I share the rather conservative view that the staff expressed in the Greenbook in terms of where business investment is going to be.

Finally, let me just talk for a moment about inflation—again in the context of these market perspectives. I tried to be as witty as David is in this discussion, and during the break it occurred to me that I should call this section “Inflation: Are Objects in Mirror Larger than They Appear?” [Laughter] That's my half-hearted effort at humor. I've probably talked about the TIPS markets at least as much as other folks around this table in the past six or seven months, and I do find some comfort in them. But I find myself increasingly viewing them as being a bit divorced from some of the data. My view is that expectations of inflation relevant for price setting may have deteriorated much more substantially than the TIPS markets and the survey measures suggest. I think the Greenbook has an alternative simulation that hits this case well, and its conclusion has to be that expectations may account for more of this year's rise in core inflation than either we or the markets estimate. Inflation is likely going to be particularly sticky in the labor markets, given my discussion a moment ago. Very low unemployment insurance claims, very low unemployment, and strong wage and job growth make me believe that the labor market may actually be tightening at the same time that everything else we've talked about is happening in the housing markets. The revision from BLS suggested that they found 810,000 jobs through March. When all is said and done about the subsequent six-month period, they may have found more jobs as well, bolstering the case that the labor markets may, in fact, be quite

tight. Total compensation is up about 8.3 percent, the fastest rate since the third quarter of 2000. Average hourly earnings have accelerated now to 4 percent. At the end of the day, we should take some comfort from the TIPS spreads, but not reliance. As we think about the measure of TIPS spreads as an indication of inflation expectations, I am troubled, probably increasingly, that the TIPS markets appear to be following our forecast rather than the actual data, and we have to continue to address that problem proactively with the markets. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thank you, Mr. Chairman. I'd actually like to start with a plea based on something that President Fisher said. I'd like to be treated like a welder. Can I get a show-up bonus? [Laughter]

MR. FISHER. Then we'll be waiting for a completion bonus. [Laughter]

MR. KROSZNER. As everyone has said, there has been relatively little information to change people's outlook fundamentally. We have the same sort of tension that we've had before—slowing growth but persistent inflation. Although we see some signs that inflation is coming down, it is still persisting at a higher level than many people, including me, would like it to be. Despite the slowing housing market, private domestic final purchases continue to be reasonably robust. The low third-quarter numbers in the Greenbook are really due to some volatile areas, some special factors: inventories reflecting the weakness in the auto sector, some changes in the auto sector, and timing of defense purchases. Net exports also tend to be fairly volatile.

The suggestion is that maybe this low is just temporary, as the Greenbook has said. Also, virtually everyone around the table has suggested that the labor markets are really quite robust. Exactly as Governor Warsh said, some of the recent numbers suggest that compensation is on the

rise, although the ECI is still not quite as robust as some of the other measures. Certainly we could have a benign scenario in which the continuing high profit margins absorb some of these higher labor costs without necessarily leading to higher price pressures down the line. But the high equity markets may also be supporting high demand, or the recent increases in the equity markets could be to some extent offsetting the decreasing wealth effects from the housing market. Obviously, there could be a tension if the markets start to come down and profits aren't quite as robust as people have been projecting. We also may have other temporary factors that seem to be boosting domestic final purchases—the decline in prices for oil, natural gas, and gasoline. I hope that the lower prices will persist, but certainly the energy sector is extremely volatile with prices moving around enormously; and as a number of people mentioned, there are a lot of potential problems down the line that could lead to higher energy prices. One thing that didn't lead to higher energy prices this year was a very benign climate. We had unusually good weather this year. Last year and the previous year, we had unusually bad weather. So I don't know whether a number of factors are just making us have a bit of luck right now and are perhaps temporarily boosting demand.

What does this mean for inflation? As we always say, there are transitory factors, and there are more likely to be permanent factors. We've talked about some measurement issues with respect to owners' equivalent rent—probably that's something transitory. We're certainly not certain about that. As for energy shocks, we have very little evidence that there has been a lot of feed-through from energy shocks to core inflation, and as a number of people mentioned, I don't think we can rely too much on the decline in energy to say, "Well, it didn't get there on the way up, but it will help us on the way down." I don't see a good basis for relying on that asymmetry. There is the standard output gap story, but from discussions around the table and

certainly from the Greenbook, I think there is not an enormous output gap to rely on to bring inflation down, even if one believed that that gap has an important effect—and there is vanishing evidence that it has an important effect.

Then there's the role of expectations in the economic models—the multiple equilibriums story. Just our markets' belief that inflation will be relatively low going forward affects price-setting behavior, which affects the willingness of consumers to pay more for goods and services. That leaves us with a benign but very fragile scenario. As we know, with any so-called multiple equilibriums situation, it's not clear exactly what is driving expectations. Obviously, part is their belief in the people around this table, which is something that is incredibly important; it's something that we really need to maintain, but something that we don't understand very well. In these five weeks, we haven't had much change in the fundamentals, but I am left just as uncomfortable about really understanding the inflation situation, the short-run inflation dynamics, because we have an output gap approach, an energy shocks approach, an expectations approach, and sort of a measurement approach with owners' equivalent rent.

I take a bit of each of these, and there has been a lot of discussion of the different ones around the table; but I don't think we have a good, overarching view of what is driving inflation, what the key inflation factors are. For me, that's one of the most worrisome things going forward because I find it hard to put all of them into a consistent framework. It would be valuable for us to think a great deal about that. Certainly, it may come up in the discussion of the communication strategy, but it's something that I'm trying to face more and have found it more difficult to understand.

We're going to get an enormous amount of information. We have holiday retail sales coming up, so we're going to find out a lot about consumption. We have two employment

reports coming up. We have two rounds of ISM, preliminary revised GDP, ECI, and a lot of information on the housing market. We'll probably find out a lot more, because in the colder areas the housing market tends to slow down naturally. The seasonal is very strong there. So we should know from some of the data in December whether the numbers from permits, which suggest that the housing market is continuing to go down, or the starts numbers, which seem to be flattening out, show where we are likely to be at the beginning of next year. There's a lot of uncertainty with respect to both the economy and inflation. In particular, my inflation concerns come from not having an overarching way of understanding whether the factors that we talk about as temporary are really going to be temporary. Thank you.

CHAIRMAN BERNANKE. Governor Mishkin.

MR. MISHKIN. Thank you, Mr. Chairman. As I see it, the data have actually been coming in very much along the lines of where we were at the last meeting in terms of the outlook. The only way that I would change my view slightly is actually good news, in that I see somewhat less downside potential than I saw at the last meeting. In particular, I think that the housing market, although it has retrenched a lot, which I actually consider a rebalancing of the economy, does not look as though it's going to collapse in a nonlinear way. For example, we see that the market has some expectations along those lines—for example, the stock prices of builders have actually come back a substantial amount. We also see that consumers seem to be holding up very well. The real danger that we were worried about in terms of a housing market retrenchment is that it would spill over in a nonlinear way to the household sector. We don't see any evidence of that either. Consumer confidence is staying strong. The stock market is up—again, an indication that these spillover effects are not occurring over and above those that we think would be normal in terms of wealth effects and so forth. So, for me, there is actually some

good news here in that the possibility of a soft landing has actually increased. My view of where the economy is heading has not undergone a major change, but I have a bit less in the downside tails than I had before.

The characterization of a deceleration of core PCE inflation also seems to be a very reasonable one. I think the evidence is moving in that direction. But I do want to emphasize that I see no reason that core PCE inflation will fall below 2 percent. We see that inflation expectations are solidly grounded. The good news in that has been that we had an increase in energy prices and we did not see an acceleration of inflation expectations. However, the numbers there are around 2½ percent on the CPI, and that's consistent with a 2 percent PCE deflator inflation. When we think about going out past the two years, I do see deceleration along the lines of the Greenbook. I don't see anything more encouraging after that. Talking about the issue of potentially less persistence does not tell us, in fact, that inflation should fall below what inflation expectations are anchored at. So thank you very much.

CHAIRMAN BERNANKE. Thank you. Let me summarize what I heard, and then I would like to make a few comments of my own.

There were several themes around the table. Many people noted the bimodal economy. Housing is still quite weak, although a number of people noted that they thought the lower tail had been trimmed somewhat. Autos are undergoing inventory adjustment, and some people noted slowing in a few other sectors. However, the general view was that spillovers from housing to the rest of the economy had not yet occurred. Most people noted that the labor market is quite healthy, with widespread shortages of labor, particularly of skilled workers. It was further noted that consumption spending would be supported by the job market, by income growth, and by the fall in energy prices. Overall, the assessments of growth, as I heard them,

were that it would be moderate going forward, either around potential or perhaps slightly below potential, and some saw a bit of upside risk to that projection.

With respect to inflation, costs of raw materials and energy are rising more slowly or are declining, and headline inflation has fallen with energy costs. Some felt that core inflation would moderate gradually, but others were less confident about that. The behavior of rents and the behavior of productivity are two important unknowns going forward, and wage growth probably presents the biggest upside risk to inflation. Most members expressed concerns that the high level of inflation could raise inflation expectations and undermine Fed credibility. So the general view, which I think essentially everyone shares, was that the upside risks to inflation exceed the downside risks to growth at this juncture.

I hope that summary was okay; let me just make a few comments of my own. As a number of people noted, the intermeeting data were actually fairly limited. The employment report did indicate a fairly strong labor market. There is still, to my mind, some disconnect between the anecdotes and the data; in particular, the wage data do not yet reflect what I'm hearing around the table about wage premiums. For example, average hourly earnings actually grew more slowly in the third quarter than in the second quarter. I think the ECI next week will be a very important check for our anecdotes. On the positive side, as Kevin and others noted, the tone was generally stronger in financial markets. The stock market is up. I note the ten-year real rate was up about 15 basis points since the last meeting, which I take to be a positive indication of growth.

Oil prices continue to decline, which obviously is good for both growth and inflation. I thought you might be interested in thinking about the quantity effects of the decline in oil prices. We've had a decline in oil prices of about \$15, which back-of-the-envelope calculations or



FRB/US analysis can tell us should add about 0.45 percent to the level of real consumption or about 0.35 percent to the level of real GDP. Dave Reifschneider was very helpful in finding those numbers. That's a change to the level, so the oil price declines could add 0.3 to 0.4 percentage point to growth, say, over the next six quarters. Another way to look at that is to think about the relationship between oil prices and house prices. A rule of thumb that might be useful is that a \$3 decline in oil prices offsets approximately a 1 percentage point decline in house prices in terms of overall consumption effects. So oil price declines are essentially the negative equivalent of a 5 percent decline in house prices. An interesting question that we may have to address at some point is, what is the policy implication of oil price declines? I think it's clear that oil price declines will lower both total and core inflation, but will also increase growth. Therefore, our policy response to the lower oil prices could depend on our preferences about growth versus inflation and also our assessments of the risks to both of those variables.

On the housing correction, I agree that there is perhaps some reduction in the lower tail. But it's important to point out that, even if we see some stabilization in starts and permits, a lot of inventory is still out there, and there's going to be an inventory correction process that could be quite significant. The current months' supply of homes for sale is greater than 6 now, excluding cancellations; the number over the past eight years has been very stable around 4, although before 1997 it was higher and more variable, which is a source of uncertainty. To get a sense of the magnitudes of the potential housing correction, I asked Josh Gallin to do the following simple simulation. Single-family housing sales were about 1.0 million at an annual rate in July, about 1.05 million in August. So I asked Josh to consider a case in which sales flatten out at the level of 1.1 million and continue at that level indefinitely; in addition, homebuilders respond to three-fourths of the increase in sales by extra building and allow the

other fourth to go into reducing inventory. When you do that calculation, you find that you actually work off the inventory. By the end of 2008, the months' supply is down to 4.1. Part of that decrease occurs because the sales level is higher, and so the denominator is bigger as well. Thus that particular scenario is a sensible one in terms of getting the inventories down. However, the effects on GDP, because the correction is still significant, are not trivial, but they are also not that large. The effect of this scenario on GDP growth from the fourth quarter of this year to the second quarter of next year is about 0.2 on growth and about 0.1 in the third and fourth quarters. So a very substantial part of the housing correction is still in place because of the need to work off inventories over the next few quarters.

Those are a few comments on the real side. I think that some of the tail risk has been reduced. I agree with the Greenbook that growth should be slow, at least through the first quarter of next year, because of housing corrections, but consumption will probably pick up and lead to a stronger growth path after that.

Let me say a few words about inflation. I think I need to push back a little on the view that there has been no improvement in core inflation or total inflation. In fact, inflation is very slow to respond to its determinants, and the fact that we actually have seen some improvement in some sense is a positive surprise, not a negative surprise. The attention that's paid to the twelve-month lagging inflation measure is a problem in this context, because we had four months of 0.3 percent readings from March to June, and they're going to stay in that twelve-month lagging measure until next March. I can predict with great confidence that next March through next June the twelve-month lagging inflation measure will decline. So I think it's more useful, President Lacker, to look, a bit at least, at the higher-frequency measures to see what the trend of movement is. Although, like President Lacker and others, I'm not happy with the level,

I think the direction is actually very good. For example, the core CPI three-month went from 3.79 in May to 2.75 in September, so it's a decline of 104 basis points. The core PCE three-month inflation measure went from 2.95 in May to 2.20 in September, using the staff estimate for the core PCE deflator for September. So it's certainly moving in the right direction.

The other comment I would make about this subject is that we must keep in mind how much is tied to the owners' equivalent rent component. I would say, in fact, that once you exclude that, if you do, just for comparison, that 2006 is roughly equivalent to 2005 in terms of core PCE inflation. To look at the high frequency numbers, excluding OER, which I'm doing now for illustrative purposes, core CPI fell from 3.01 in May to 2.23 in September, and core PCE inflation fell from 2.52 in May to 1.93 in September at an annual rate. This is saying that a significant part of the speedup and now the decline in the rate is related to this owners' equivalent rent phenomenon—not all of it, but a significant part. It's important to know that because, as we've discussed around the table, the OER may have its own dynamic. It may respond in different ways to monetary policy than some other components do. It is an imputed price, which people do not actually observe, and so it may have a different effect on expectations than, say, gasoline prices or other easily observed prices. The other important aspect of the OER is that, to the extent that it is a major source of the inflation problem, it makes clear that inflation probably has not been a wage-push problem so far because owners' equivalent rent is obviously the cost of buildings, not the cost of labor. So if you look at inflation over the past few months, there has been slow improvement, and so far I don't think that we have seen a great deal of feedthrough of wage pressures into inflation. I've looked through all the various categories of goods and services whose prices have increased, and I can find no particular relationship to labor market factors.

Another comment along this line: It's also true that inflation of even 2.20 percent, which was the core PCE three-month inflation rate in September, is too high in the long run. I agree it should be lower than that. We do have to ask ourselves, given that inflation has been high and that, as people pointed out, it has been high for a number of years now, how quickly we should bring it down. Most optimal monetary policy models will suggest that a slow reduction is what you would try to achieve if you start off far away from the target and if the real economy is relatively weak. Now, the question arises whether we are going in the right direction. I think so far we are, but I would certainly agree that we have to ensure that we continue to go in the right direction. The Greenbook forecast is predicated on a constant federal funds rate from the current level; actually the rate declines in 2008. But what it leaves out is the notion that we are gathering information and trying to resolve uncertainty, depending on how things develop. Obviously, policy can respond in one direction or another and could, if inflation does not continue to decline, be more aggressive to achieve that. I felt I needed to talk a bit about the fact that we do have some improvement in inflation, and so the situation cannot really be said to be deteriorating.

Having said all of that, now let me come back and agree with what I've heard, which is that, although we have not yet seen much wage-push inflation, clearly the risk is there. Anecdotally, and to some extent statistically, we have very tight labor markets. It is surprising how little wage push there has been so far, and if labor markets continue to stay at this level of tightness, then one would expect that you would get an inflation effect that would be uncomfortably persistent. That is a real concern, which I share with everyone around the table. If the Phillips curve language doesn't appeal to you, another way of thinking about it is that, if the labor market stays this tight, which means that growth is at potential or better, then the real

interest rate that is consistent with that growth rate needs to be higher than it is now. I agree with that point as well. So my bottom line is that I do agree that inflation is the greater risk, certainly. I think that the downside risk from output has been slightly reduced. I also think the upside risk to inflation has been slightly reduced. Thus we're not in all that different a position than we were at our last meeting. We can discuss the implications of that tomorrow. I think I'll stop there. Yes, President Poole.

MR. POOLE. Mr. Chairman, I was going to make a suggestion. I don't know whether there is general assent to this. It seems to me it would be helpful, before our December meeting, to have a better read on the vulnerability of the housing firms to bankruptcy. I can imagine a lot of defaults there, causing us some concern or a lot of public concern. Presumably, with all our banking and housing contacts, we ought to be able to get a better read. All I know is the very informal kind of feedback that I received over recent weeks, and a lot of people brought up that all these builders have only six months or so and some of them are going to go under. So a suggestion is that, as part of the Beige Book process, we try to get a better read on that situation.

CHAIRMAN BERNANKE. I would ask the people around the table, in their conversations in their Districts in particular, to talk to medium-sized homebuilders. We've had the large homebuilders at the Board, and we have considerable contact with them; but what we don't have is contact with the medium-sized homebuilders.

MR. POOLE. Right. My understanding is that the large ones are in pretty good shape.

CHAIRMAN BERNANKE. Okay. Let me ask the Committee's preference here. The reception tonight starts at 5:45, followed by dinner half an hour later. We can adjourn now, or Vince is prepared to give his opening remarks on the policy session, which would allow us to finish earlier tomorrow. We'll do the go-round tomorrow, of course. Jeff?

MR. LACKER. Let's adjourn now.

CHAIRMAN BERNANKE. Okay. How many people would like to adjourn now?

MR. REINHART. Half the class. [Laughter]

MR. KOHN. Is President Lacker allowed to dissent on that? [Laughter]

MR. LACKER. Nothing personal, Vince.

MS. MINEHAN. We'll probably remember it between tonight and tomorrow, Vince.

CHAIRMAN BERNANKE. All right. Do I take it, then, that we would like to hear Vincent's presentation?

SEVERAL. Yes.

CHAIRMAN BERNANKE. All right. Vincent, whenever you're ready.

MR. REINHART.<sup>2</sup> Thank you, Mr. Chairman. The pulse of the market regarding your policy action today is the flat line in the top panel of your first exhibit. [Laughter] Not weakish data releases early in the period, nor stronger ones later, nor speeches by some of you interpreted as hawkish shook the belief that the intended federal funds rate would remain at 5¼ percent after this meeting. Expectations about the policy rate at the end of next year, proxied by the December 2007 Eurodollar futures rate—the dotted line—showed more life, falling about 20 basis points by the middle of the period but ending up 5 basis points higher, on net. As can be seen in the middle left panel, market participants still anticipate almost ½ percentage point of policy easing next year. Once again, as denoted by the green shaded area, the 70 percent confidence interval derived from options prices is quite narrow. We routinely track the economic forecasts of a subset of nine of the primary dealers, and their average path for the federal funds rate through 2007 is plotted as the dashed line in the middle right panel. Those dealers and the forecast from market quotes—but not the Greenbook assumption plotted as the horizontal line—call for policy easing next year. The primary dealers' policy call occurs against the backdrop of forecasts for the unemployment rate (the bottom left panel) and core CPI inflation (the bottom middle panel) that about match the Greenbook's. What is different is plotted at the bottom right: These dealers expect real GDP growth to track about ½ percentage point higher than does the staff. One possibility is that these market participants, compared with the staff, foresee both more drag on domestic spending and faster-expanding potential output. If so, dealers would correspondingly view policy ease as necessary to generate economic growth that will be acceptable to you.

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<sup>2</sup> Material used by Mr. Reinhart is appended to this transcript (appendix 2).

Your own view as to the economy's potential to produce no doubt influences your views on policy, as do your interpretations of the three factors described in exhibit 2. The top left panel plots existing and new home sales as the solid and dotted lines, respectively. You might see in that chart that house sales have declined sharply and view the resulting weakness as a risk to the outlook, as has been the case at the past few meetings. Alternatively, you might see that home sales appear to be bottoming out amid generally strong fundamentals. As one newsletter put it—and I think that the author meant it to be good news about the prospects for spending—that “the point of maximum deterioration in housing activity has probably passed.” The middle panel plots the real federal funds rate, which some of you may emphasize has risen considerably and take its level now to be restrictive. Others, however, might stress that the real federal funds rate remains below its average of the late 1990s. A third potential source of alternative interpretations might be the measures of inflation compensation plotted in the bottom left panel. For some, the chart shows that inflation compensation remains contained and has declined of late at shorter horizons. Others may find only cold comfort in this because inflation compensation nevertheless remains above the range consistent with their price stability objective.

The policy choice today depends on your assessments both of the economy in the near term and of the appropriate path of inflation over a longer time frame—the subject of exhibit 3, which repeats some material from the “Medium-Term Strategies” section of the Bluebook. The solid line in the top left panel plots the setting of the nominal funds rate that, in the FRB/US model, best achieves the objective of minimizing deviations of the unemployment rate from the NAIRU and of core PCE inflation from a goal of 1½ percent, while avoiding jarring adjustments in the nominal funds rate. The forces shaping the outlook are the same as in the extended Greenbook baseline, and investors are assumed to understand the entire path of policy—which they deem credible when determining asset values. Wage and price setters, in contrast, base their expectations on less information and alter their views on long-run inflation only sluggishly in response to actual inflation. As is familiar from such exercises in previous Bluebooks, it thus takes a long time to work down inflation when the goal is below prevailing inflation expectations at the start of the simulation. With the Phillips curve as flat and inflation expectations as inertial as in the FRB/US model and with equal weights placed on the objectives, policymakers find it optimal to trade off a persistent miss of the inflation goal (the bottom left panel) for smaller cumulative labor market slack (the middle left panel). In this simulation, progress may seem especially glacial because the steady dollar depreciation that is required to rein in the deterioration of the current account generates persistent upward pressure on domestic inflation. But even the modest progress that is made on inflation under this scenario requires about ¾ percentage point of firming over the next year.

We explored two modifications of the standard framework to help speed disinflation. In the first, and as plotted as the dashed red lines on the left, policymakers are assumed to put much more weight on the inflation goal relative to maximum employment. Indeed, progress in reducing inflation is notable, but the unemployment rate is also notably elevated. The simulation underlying the dotted

green lines maintains the assumption of equal weights in the objective function but changes the assumption about the information that wage and price setters use so as to create a more favorable inflation-unemployment rate tradeoff in the short run. This variant assumes that the level of the nominal funds rate conveys a noisy signal to wage and price setters about policymakers' inflation goal. It is optimal, then, to impose policy restraint early on so as to send inflation expectations down and accomplish a quicker and less costly disinflation. The credibility you attach to such a channel may play some role in your willingness to firm policy in the near term. But you may not see any need to do so if you are drawn to the dashed blue lines in the right-hand column of charts. Those lines summarize macroeconomic outcomes for policymakers with an inflation goal of 2 percent. Because current inflation expectations about comport with that goal, policymakers can keep the nominal funds rate at 5¼ percent for some time and still observe declines in inflation given the other forces of disinflation in the baseline.

Exhibit 4 considers some aspects of the wording of your statement to be released after this meeting, starting with the rationale portion in the boxes at the top. As noted at the left, in drafting the Bluebook, we proposed including in row 2 of all the draft statements that "economic growth appears to have slowed further in the third quarter." This wording seemed to have the advantage of acknowledging the upcoming release of the initial third-quarter estimate of real GDP on Friday, which by the staff's reckoning is likely to be weak. Some of you may be concerned, however, that this mention might heighten market scrutiny of that data point or potentially set up the Committee for failure if the release proves surprisingly strong. As noted in the top right box, we simplified the language about inflation pressures in row 3 of alternative A, partly in response to earlier criticism that the Committee could be interpreted as having slipped a derivative. The statement has been pointing to the levels of the prices of energy and other commodities as having "the potential to sustain inflation pressures." Even if you are not drawn to the phrasing of the rest of the alternative, you might see some merit in this simplification for row 3. Or you might not, [laughter] given the focus in markets of changes in the wording of the statement.

The Bluebook effectively offered four alternatives this time, the three in the table and a possible middle ground between B and C mentioned in the text. These are laid out in the remainder of the exhibit. In recent statements, the risk assessment has pointed to upside risks to inflation and the possible need to firm policy further. Market participants nevertheless appear to attach greater likelihood to policy easing than tightening. To protest that view and to underscore its commitment to reduce inflation, the Committee might choose to modify its words to note, as in alternative B+, that "although the Committee both seeks and expects a gradual reduction in inflation, it continues to view the risks to that outcome as remaining to the upside." Some of you, however, may view this as change for the sake of change that unnecessarily risks confusing market participants as to the Committee's intent.



For the sake of reference, the last exhibit repeats, with no change, table 1 from the Bluebook. That concludes my prepared remarks.

CHAIRMAN BERNANKE. Thank you. Are there any questions for Vince? President Moskow.

MR. MOSKOW. Vince, I want to ask you about charts 5 and 6 in the Bluebook. Also, I want to make a comment and then ask a question. Chart 5, the equilibrium real federal funds rate chart, shows that the current fed funds rate is slightly above the range of models that close the output gap within twelve quarters. It doesn't really speak to inflation tensions in monetary policy. However, chart 6 deals directly with inflation and monetary policy, and you have the 2 percent target and the 1½ percent target. Neither scenario achieves the target by 2012, though you do get closer to the 2 percent target if that were, in fact, our target. Both of the charts are helpful to us as policymakers. My comment is that I recommend that in future Bluebooks you include them both, as you have done this time and as you have done sometimes but not consistently in the past. I think they give us a fuller picture of the total outlook, and it's more helpful for policymaking. The question is whether chart 5 and chart 6 can be integrated more closely so that we can understand the implications in chart 5 of the output gap for inflation.

MR. REINHART. You're exactly right, and that's why we tried to put them closer together in this Bluebook. [Laughter]

MR. MOSKOW. So we're making progress.

MR. REINHART. We're making progress—incremental, as all progress at the Federal Reserve is. [Laughter] The notion of the equilibrium real rate is: if you held the real rate constant for the next twelve quarters, the output gap would close at the end of that period. That doesn't, however, mean that you would like the inflation rate you get at the end, twelve quarters from now. It's not a policy rule. It's just a way of summarizing the forces at work in the model.

The optimum policy exercises explicitly take into account your preferences about inflation as well; hence, you can get different results. In the future we do want to try talking more about the equilibrium real interest rate in terms of the full model simulations rather than the reduction presented in chart 5. Actually, my intention was to include a medium-term scenario in the Bluebook four times a year. They don't change all that much, and if your calendar is such that you're going to have four two-day meetings next year, it seemed appropriate to line those up.

MR. MOSKOW. Well, I know they don't change very much, but I still think it's helpful to have them side by side as we look at them.

CHAIRMAN BERNANKE. Vice Chairman Geithner.

VICE CHAIRMAN GEITHNER. I think I'm echoing Michael, but I want to compliment the staff on the evolution of the Bluebook. I think that seeing that complement of prisms on different policy choices or different paths is useful, and we should see them all the time and more of them. I sort of missed the inclusion of the range of ones we saw in June. But having said that, may I ask a broader question? I want to come back to the debate we didn't really have about whether what we see in TIPS about long-term inflation expectations should be encouraging or discouraging about the prospects for achieving sufficient moderation in inflation. Would Vince or David or anybody else like to speak to the question of whether, if TIPS five-year inflation compensation five years forward stayed at its current level of between 2 and 2½, that would be holding up underlying inflation going forward? Or would that be consistent with moderation? Now, you've given us a bunch of charts that express a view on that, I think. I don't know much about the assumptions underpinning those about the path of expectations going forward.

MR. REINHART. Let me make two points, Mr. Vice Chairman. First, a good measure of the compliment should be directed to Dave and his staff as well because these model

simulations really do take a lot of effort on the part of the folks in the MAQS Section in Research and Statistics. Second, in the box in the Bluebook we tried to take our best guess of that. Actually, President Lacker mentioned it. The basic problem is that those are measures of inflation compensation, not inflation expectations. There are both an inflation risk premium and a differential liquidity premium between nominal and indexed debt that pollute the measure of inflation compensation. Not only could they change, which potentially changes the level relative to inflation expectations, but also they could very well be time varying. We've seen big swings in our estimated term premium in the nominal yield curve. We could just as well also be seeing swings in the inflation risk premium. When we go to those factor models of the term structure and try to back out those estimates of the inflation risk premium and also try to take account of the adjustment between CPI and what most of you talked about in terms of core PCE inflation, we see inflation expectations, at least coming from the Treasury market, in the neighborhood of 2 to 2.4 percent across the term structure. That's a higher number than what many of you have identified as your comfort zone, and it's not inconsistent with what we see from survey measures as well.

MR. STOCKTON. If you think about the extension of the staff forecast—basically, if you look at beyond the 2008 period—it's easy to see how you get back to 2 percent. Beyond that, I guess our underlying assumption would be that you will have to get inflation expectations down if you want to have inflation below 2 percent over that longer term. Now, given the way that we typically run these simulations, you have to create an output gap. There could be other channels that the model can't capture—perhaps talk or communications or something could shift that. As we have indicated, we don't know the evidence that we would be able to present to you

to assure you that that would be the case. But it looks as though, to get below 2 percent, more work would have to be done to get at those expectations.

CHAIRMAN BERNANKE. Other questions? President Minehan.

MS. MINEHAN. Just to follow up on that, when we were experiencing rates of PCE and CPI core inflation below 2 percent and there was considerable concern about the level of disinflation, what were market expectations saying about inflation at that time? What were measures of inflation expectations saying? My sense is that the professional forecasts have been 2½ percent since time began. But were any other measures suggesting at that time that they expected inflation that low going forward?

MR. STOCKTON. Basically, it looks as though the five-year inflation compensation five years ahead was running around 2 percent and even then fluctuating. It's a little harder the further you reach back, so I don't know about the liquidity premiums and all the various ways in which you would extract that. It has fluctuated but doesn't really look as though it has had much trend up or down. There would be more noise in the TIPS than there is in the professional survey, but they all seem to be sort of consistent with 2 percent.

MS. MINEHAN. It kind of begs the question then, doesn't it, about what level of low, stable inflation is the right level of low, stable inflation? [Laughter]

CHAIRMAN BERNANKE. That comes tomorrow. [Laughter]

MS. MINEHAN. That's why I pose the question right now.

MR. KOHN. What a lead-in.

MS. MINEHAN. I mean, we don't have to answer it. I don't think anybody has an answer to it, but we've been through a whole cycle here, and inflation expectations are not telling a totally different story, even through the whole cycle.

CHAIRMAN BERNANKE. The ten-year TIPS came down quite a bit during the deflation scare.

MR. STOCKTON. You do see fluctuations over the past five or six years. It looks relatively trendless after that.

CHAIRMAN BERNANKE. Are there other questions for Vince? We'll reassemble tomorrow at 9:00 a.m.

[Meeting recessed]

**October 25, 2006—Morning Session**

CHAIRMAN BERNANKE. Good morning. We've already heard Vincent's report on the statement and policy proposals, so we'll begin the program this morning with the policy go-round. After that, we'll have our discussion on communications. We'll adjourn at that point. For those of you who can stay for lunch, we have a short presentation on planning for the Federal Reserve centennial, which I hope most of you can stay to hear about. So without further ado, let's begin the second go-round, and Debbie will take your names. President Poole.

MR. POOLE. Thank you, Mr. Chairman. Let me start with my policy conclusion and then explain how I got there. First of all, I support holding the federal funds rate at the current level of 5¼, and I also support minimal change in the statement because I think that not much has happened and any change that we put in place is only going to produce questions in the market about what we meant and why we did it.

I also want to say that my policy outlook going forward is symmetrical around 5¼. That may take some people by surprise, given that I am generally characterized as an inflation hawk, and I want you to understand the logic of that view. In terms of the December meeting, I would, given current information, put a probability of, say, two-thirds that we will want to keep the fed funds rate where it is, splitting evenly the other one-third up and down, depending on the data. When I look six months ahead, my outlook remains symmetrical, but my probability on the current fed funds rate of 5¼ might drop to one-third and split the other two-thirds on either side. If others around the table agree that the outlook for the fed funds rate should be symmetrical or if there are some other views along those lines, I would hope that the minutes could report that view because guidance to the market on this matter could be important in terms of the way the market treats incoming data.

So where does that view come from? We need to have a sharp distinction between, first, policy preferences, or the objective function, or the loss function; second, the way the economy works, or the current state of the economy; and third, probabilities of various possible economic outcomes, or data looking forward. Those three concepts are analytically distinct. With regard to the first, I have a very asymmetric loss function. If inflation failed to slow or, worse yet, if it increased, we would have much higher long-run costs from that outcome than from GDP growth modestly below potential. In that sense, my loss function is decidedly asymmetrical, saying that we must deal with inflation that fails to slow or, worse, increases. But I note that market expectations are quite asymmetrical. The policy conclusion comes from combining the situation in the market—the market structure or the way the economy behaves—with the loss function. If the economy were in a symmetrical position, the asymmetric loss function would lead to an asymmetric policy outlook for the funds rate. But the economy is not in a symmetrical situation and has not been for quite a long time, with the market expectations of easier policy next year. Now, of course, that may change as data come in, but that's how I see it right now.

Upside surprises in the data, some combination of stronger economic activity and upside inflation surprises, could easily drive up the ten-year bond rate 50 basis points, which would take it up to the current fed funds rate; 75 basis points might restore a more normal term premium. Or you could even anticipate that the bond market might go a good bit higher than that. Over the past fifty years, the average spread between the ten-year rate and the fed funds rate has been about 90 basis points, so there's lots of room for the ten-year rate to go up without our doing anything. In fact, if we got an outcome of the data in that direction between now and December, or even January, I'm guessing that, if the ten-year rate went up 75 basis points in response to the incoming news, we might be loathe—depending on the nature of the news, of course—to add to

it by raising the fed funds rate, even though our loss function, in my view, ought to be heavily tilted toward fighting inflation. So the combination of the asymmetric loss function and the economy being asymmetric in the other direction, I believe, ought to point to a symmetric outlook for the fed funds rate. If the incoming data were substantially weaker than currently expected and the ten-year rate were to decline 25 or 50 basis points from where it is now, that process couldn't go very far unless the market started to develop the view that there would be a policy easing in the future. That is, if the market were convinced that we were going to hang on  $5\frac{1}{4}$ , perhaps in part because we keep insisting on our concern about inflation and the market reads us as having a policy bias toward tightening the fed funds rate, then we would not get the full possible benefit of a market response to weak data bringing down longer-term rates. We should want that to happen if we got weak data going forward.

That's my argument as to why I believe the policy outlook for the fed funds rate ought to be symmetrical. I'm not arguing for any change today; I hope that's clear. But I believe that we should provide guidance to the market going forward that, in the event that the economy comes in weak, we're prepared to cut rates. Conversely, we should emphasize that, if we have strong data, particularly bad inflation news, we won't necessarily pull the trigger right away. I believe that is the right guidance going forward. Thank you.

CHAIRMAN BERNANKE. Thank you. Yes, two-handed intervention.

VICE CHAIRMAN GEITHNER. Bill, I'm not sure this is quite the way to ask the question, but if the Committee adopted that approach and if the market's response to that change in the signal were to lower the expected funds rate path because of the way they interpret the change in the signal, would that be consistent with the objectives you're trying to achieve?

MR. POOLE. I think so, yes.



VICE CHAIRMAN GEITHNER. So that would leave you with a forecast for inflation that you'd be comfortable with?

MR. POOLE. Right. My view of the recent news on inflation is that it has been marginally better, that it is tilted a bit in the right direction. I think that's the view that the Chairman expressed yesterday, and that has certainly been my view. But we should want the market to respond to incoming data in a way that it would be very helpful to the policy enterprise that we're involved in. So given that my outlook for the economy is pretty symmetrical around the Greenbook forecast, I think we should give some genuine weight to the possibility that the economy could come in weaker. We should not want to rule that out and tell the market that it's going to take a really bad outcome for the economy for us to be willing to move.

VICE CHAIRMAN GEITHNER. I wasn't trying to talk you out of your view, [laughter] but don't the policy rules, as a prism on these choices, tell you that, if you alter your weights on your loss function—

MR. POOLE. No, no. The loss function should reflect our fundamental beliefs about our objectives and what we're trying to accomplish. You need to keep the loss function analytically distinct from your judgment about the way the economy works and the stance of the economy. Our preferences ought not to blow in the wind.

VICE CHAIRMAN GEITHNER. This is really just a question about the framework the policy rules give us for this choice. The way I understood this is that, if you alter the weights and you're asymmetric in your weights, in your policy rules, but you're talking about a forecast that's sort of the basic central forecast underpinning your rules, don't you get a higher path?

MR. POOLE. But there's a distinction. What I wanted to say was that my weights are asymmetric, they have been asymmetric, and I expect them to continue to be asymmetric. The

exercise that we had in the Bluebook and in the presentation yesterday is to suppose that your weights are different from my weights—not that we alter our weights as we go along but that your weights might be different from mine—and then what would be the policy conclusion from that.

VICE CHAIRMAN GEITHNER. I agree with you on that.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. I was just listening to Bill, and I consider us neither hawks nor sparrows nor doves. I hope that we're being owlish, and that was a very owlish approach. But I'd like to come around to what Bill said, maybe in a different way. It struck me, Mr. Chairman, when I reflected last night on what I heard at the table yesterday, that on balance we sustained a barrage of attacks on the inflationary front. They came from energy. They came from commodity prices. They also came from potential shifts in the pricing behavior among business producers. And we've come out whole. I attribute this to our actions and our comportment and to the continued ability of the private sector to adapt and of private-sector producers and consumers to mine resources worldwide and through cyberspace as they've done so effectively. I know we're doing a lot of work on that. It struck me particularly yesterday that we are not hearing anything about pricing power at this table. That was our preoccupation for a while. Not one person at the table mentioned it in the way it had been mentioned in the past several conversations. We are, however, continuing to hear about the availability and the cost of labor, and some of those costs, incidentally—such as the welders and Governor Kroszner's show-up premium—are not going to be reflected in the data.

The bottom line is that I think we've made substantial progress. But I think we have to be very mindful, Mr. Chairman, about perception if we're to influence what really counts, which

is inflationary expectations, and about whether those expectations are measured accurately by TIPS spreads, which I personally doubt. One need look no further than this morning's *Financial Times* editorial or Bill Gross's recent client letter—I've known Gross for twenty years, and I know he's an oddball. Actually, I'd like that word struck from the record. [Laughter]

MR. MOSKOW. What do you want to substitute? [Laughter]

MR. FISHER. He's increasingly addled, but his words do carry weight. In his recent client letter, he says, "Inflation is leveling off at admittedly unacceptable levels." Hence my careful reference to the word "comportment." I think first about the immediate statement, and I want to come to that.

I also think, by the way, of one thing we'll get to this afternoon, which is the centennial. The transcripts of these meetings will be released as we approach the centennial, and I think we have to make very clear that this FOMC, like previous ones, is extremely vigilant with regard to the greatest threat to our society, which is inflation—at least to our economic society. We need to issue a statement that makes it clear that we're mindful of and remain vigilant about inflationary risk. In Vince's table, something between B and B+, as you laid it out yesterday afternoon, would do the trick. By the way, I would tack on "to the upside" at the end of the first sentence in that right-hand column B—it's sort of a mix between B and B+—because we do view inflationary risk as being to the upside. That's an asymmetry.

I want to make one other comment. Governor Warsh gave a very impressive briefing yesterday on the financial market's perspective, and we've heard from others that the equity market's robustness has given us something of a cushion with regard to the weakness in housing. Although many at the table do not seem to share the staff's estimation of third-quarter growth—we'll find out on Friday—and to my mind, HSBC is the only securities house I've found that has

an analysis similar to yours, we have to be very careful in stating our views on growth. And this comes around to Bill's statement, I think, on the first rationale box of alternative B, because we say that economic growth appears to have slowed further in Q3. I can accept that. But then we say "going forward"—implying going forward from Q3—the economy seems likely to expand at a moderate pace. So are we saying "moderate" from a very slow third quarter? That's not even what the staff seems to be saying. That phraseology might spook the equity markets, which are being driven, by the way, as I think any analyst would find out, not by top-line growth but by earnings, by continued efficiencies in the cost of goods sold, and the management of cost of goods sold and inventories. Again, we take comfort from the fact that we have a strong equities market. So I'd like to suggest replacing the word "moderate" in section 2 of alternative B with "improved." I think it's a small word change. "Going forward"—that's going forward from the third quarter—"the economy seems likely to expand at an improved pace." That's what we're saying, that's what the staff is saying, that's what we're hearing around the table, and I think we should say so. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Poole.

MR. POOLE. I have a question for Richard. When you said that inflation risks are tilted to the upside—I think you said something like that—did you mean that you believe the incoming data will likely show higher inflation, or did you mean that your utility function or policy objective function puts a high weight on inflation? I think it's very important to distinguish those concepts.

MR. FISHER. Like you, I feel that we have some moderate but still substantial inflationary impulses. What I'm concerned about is expectations.

MR. POOLE. But I want to pin you down on that because I think it's an important point. Do you believe that the probability is higher that inflation will come in higher than it has been or lower than it has been?

MR. FISHER. Do you want me to answer the question?

MR. POOLE. I'm just trying to make the question sharp. To me, the outlook for the inflation data that we're going to see is pretty symmetrical around where we have been, maybe even tilted a little to the downside.

MR. FISHER. Yes, I do think we've had a moderation of inflation; however, I don't think it has come down to a level that we should be proud of.

MR. POOLE. Then I agree with that.

MR. FISHER. I do worry that, if we don't get it down to a level that we should be proud of, we will feed expectations that we don't have the backbone to deal with what the market expects us to deal with, which should, in my view, be our single purpose.

MR. POOLE. The rate that we would be proud of is really a way of stating the objective or loss function. Okay. Thank you. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I support keeping rates unchanged and alternative B. I think that rate, at least for now, seems consistent with growth of the economy just a tad below the growth of its potential and a gradual decline in inflation. Incoming data will tell us if we're wrong on that, but right now that looks like our best bet to accomplish the objectives I think the Committee ought to be accomplishing.

I agree that the pace and the extent of disinflation are great uncertainties here. President Poole has made a valuable contribution here about the loss function relative to the policy path. A

failure to reverse the earlier increase in inflation is the main risk to good economic performance that we face. Therefore, we need to see a downward path of inflation. I think our minutes and our speeches have made it pretty clear that that's what the Committee means by inflation risks remaining. I think the public understands that.

President Poole has made a valuable distinction between the loss function and the economic outlook and what that implies for interest rates, but I don't agree with his conclusion. After all, the Greenbook forecast has essentially a flat federal funds rate and a very, very gradual decline in inflation barely along the path that most Committee members could tolerate. If our loss function is asymmetrical relative to that, it's more likely that interest rates would have to rise than to fall relative to the Greenbook path. Moreover, many members of the Committee seem to have a stronger path for output, and maybe even inflation going forward, than is embedded in the Greenbook. So the wording about additional firming that may be needed, the asymmetrical wording of a risk assessment, is the appropriate representation of how this Committee is looking at the potential future path of interest rates given both the loss function and the Committee's outlook for growth and inflation.

I do have some comments on the language. In section 2, I like the addition of the forward-looking language and, unlike President Fisher, the use of "moderate." It seems to me that the word "moderate" is fairly ambiguous, but it does suggest that we don't expect a great deal of weakness going forward or a great deal of strength. I think that's about where the Committee is—growth close to, maybe a bit below, the growth of potential, and the word "moderate" conveys the sense that the Committee wasn't looking for something really weak or something really strong going forward. So I think that was a valuable addition.

Like you, President Fisher, I did wonder about the specific reference to the third quarter and how that would play out. Governor Kroszner actually brought this to my attention on Friday. The advantage of the reference to the third quarter is that, by our acknowledging a weak third quarter, the markets might not react as strongly to a print that begins with the number 1 as they would if we didn't acknowledge that. There are also a couple of disadvantages. The third quarter could come in much closer to 2½ percent. There are a lot of assumptions built into that number. We could be wrong. But even more important, from my perspective, an awful lot of the weakness in the third quarter is in net exports and inventory change. The underlying feel to the third quarter and final demand aren't really all that different from the second quarter. So emphasizing the weakness in the third quarter in our language may not give a good sense of what we think the underlying situation was. Alternative language might be a more general sentence saying that "economic growth has slowed over the course of the year, partly reflecting a cooling of the housing market." That more general sentence about "over the course of the year" probably reflects better where the Committee is. I could live with the third-quarter language that's in there now, but I would have a slight preference for the other one.

In section 3, I actually have a slight preference for the wording under alternative A. I've always been a little uncomfortable with relating the outlook for inflation to the level of energy prices. The last major increase in energy prices was last spring, and I think they've been kind of level since April or May and actually have come down. Some of the commentary after our last announcement pointed out the contradiction in which we have energy prices both pushing up inflation and pulling it down in the future. So my slight preference, again, would be for the wording of alternative A, which says that the high level of resource utilization has the potential

to sustain pressures. It doesn't reference the high level of prices of energy and other commodities.

In section 4, the risk assessment, looking at the language that Vincent put on the table yesterday, I think the first sentence of that does a better job of enunciating what the Committee has been thinking about—that the reduction of inflation is what we're looking at. But I'm hesitant to change the risk assessment language. I think that people do understand what we mean by our risk assessment language now. I am concerned that changing it would provoke a reaction, and I'm not confident that I know what the reaction would be. So my preference, again, is to stick with the current risk assessment language that's in alternative B. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Moskow.

MR. MOSKOW. Could you just repeat the change you suggested, Don, in section 2?

MR. KOHN. Instead of "economic growth appears to have slowed further in the third quarter" it would just be "economic growth has slowed over the course of the year."

CHAIRMAN BERNANKE. Vice Chairman Geithner.

VICE CHAIRMAN GEITHNER. This is a glossary or dictionary question. Like Don, I interpreted "moderate," because I was advised by the staff to do so, as "at or slightly below potential." Have we used that phrase in the recent past in a way that would allow the reasonably informed outside person to interpret it that way?

MR. REINHART. I don't know.

CHAIRMAN BERNANKE. We've used it as a verb and not as an adjective. [Laughter]

VICE CHAIRMAN GEITHNER. What is our euphemism for "potential"? Is it "solid"? Is "solid" the conventional use?



MR. REINHART. It's sustainable or solid. I really hate to have to say this. [Laughter] We have been using "solid" as "at or above potential," and it seems symmetrical to use "moderate" as "at or below potential."

VICE CHAIRMAN GEITHNER. If we consider the merits of Don's change, or the Kroszner-Kohn change, to that second section, does it convey the sense of growth? If you look through the recent slowdown, growth strengthens relative to the pace in the second and third quarters. Does "moderate" imply some modest strengthening relative to the pace of the second and third quarters?

MR. REINHART. I think the issue is whether "going forward" means starting from the quarter we're currently in or whether it is a statement about 2007. The reason we drafted the explicit reference to the third quarter is that we're in the fourth quarter, and at least if you believe the staff forecast, you think GDP growth has already bounced back from the third quarter.

MR. FISHER. Moderately? [Laughter]

CHAIRMAN BERNANKE. President Minehan.

MS. MINEHAN. I was just going to say, too, that all of this is complicated by the fact that our assessment of potential has been written down. Even an informed observer might not have caught that nuance of how much we've written it down. Looking at what would have been referred to in a "moderate" or "solid" context, the numbers were different two years ago from what they are now. That creates an even greater level of possible confusion here. Is 2 percent good, bad, or indifferent? It depends on where you think potential is, and that has changed. So there is a complexity here that I think speaks to the difficulty of wording this sentence.

MR. REINHART. I would say, President Minehan, that the reference in the minutes of the past two meetings to the staff's marking down the rate of growth of potential has certainly caught the attention of market participants.

MS. MINEHAN. Do you think it has caught enough attention that they would still interpret a fourth-quarter growth rate of 2½ percent or so as okay?

MR. REINHART. I think, actually, that the chart I had in my briefing that showed the nine primary dealers' forecast of real GDP tracking above the Greenbook forecast suggests that they may have moved it down but they haven't moved it down as much as the staff.

MS. MINEHAN. Okay.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. Governor Kohn, concerning the assessment of risk, I think I heard you say about alternative B+ that you weren't sure what effect it would have. I'm interested in what underlies that uncertainty.

MR. KOHN. Well, my basic concern here is that we have something already that people seem to understand. Why change it? In my view, the current risk assessment is well understood, thanks to the minutes. Things haven't changed. As everybody stressed in their discussions of the economy yesterday and their sense of the risk to the outlook, nothing has changed. So I didn't see a reason to change the language.

MR. LACKER. I understand those rationales for retaining language, but you expressed uncertainty about what the effect of B+ was. It struck me—and I think was intended by Vince—as adding a dollop of hawkishness to the statement. Do you doubt that the markets would interpret it that way?

MR. KOHN. I think that's quite possible. Given that people haven't changed their views, I'm not sure why we would necessarily want to do that.

CHAIRMAN BERNANKE. All right. President Minehan.

MS. MINEHAN. As I noted yesterday, I've become somewhat less worried about the downside risk to the baseline outlook. So to some degree, that factor has changed a little since the last time. In fact, I think the baseline isn't bad at all. Indeed, it's a testament, again, to the resilience of the U.S. economy if we can actually pull off, as we seem to be doing, a gradual slowing of the powerful U.S. housing markets against the background of considerable geopolitical and energy market uncertainty and price pressures, not to mention the potential for both strong consumer retrenchment and financial market volatility.

So we seem to be threading the line through a lot of risks on both sides of this baseline, and we seem to be doing it successfully in negotiating that soft landing. I think we should take some pride in that so far so good and that monetary policy has played a key role in this unwinding process. In that regard, I continue to believe that the cost to the central bank of being wrong on inflation risks is greater than being wrong on the side of growth at this time. If growth wanes more than is now expected, we can ease policy fairly quickly. Getting behind the curve on inflation could be a good deal more costly. Thus, I am pretty comfortable with the current stance of policy, which I see as slightly restrictive. At least for the time being, I think it balances the risk of being wrong on inflation with the risk of slower growth and is appropriate given the brighter tone of much of the incoming data, with the possible exception of residential investment.

A risk-management argument could be made for raising rates, and certainly those less comfortable with the current and prospective levels of core inflation might find such an action attractive. I don't, as I continue to worry some about downside risks to growth, and I am more or

less comfortable with our forecast that, with no change in policy in the near term, inflation will gradually fall to just over 2 percent as measured by the core PCE in the next eighteen months or so. That projection, at least at this time, seems right. So I come down on the side of keeping the fed funds rate at 5¼. So that's the policy choice.

The next issue is what to say about it. I think it's important to continue to emphasize some concern regarding inflation rather than to move to more of a balance of risks. Financial markets remain quite accommodative, and I really see no reason to encourage them to be more so, thinking that policy easing might occur sooner than they do now. I think that would be the outcome of alternative A. So I'd prefer alternative B.

The next question is, which alternative B? We now seem to have B-, B+, and B. Let me just comment a bit on the variety of alternatives that have been raised. You know, I have a lot of regard for Governor Kohn, and I take his point—and Governor Kroszner's point—about section 2. However, when reading through it myself, I did think that the reference to the third quarter might help the markets react better if, in fact, the Greenbook forecast is accurate about the number that we're going to see on Friday, which is considerably less than what a lot of people in the market think we're going to see. I thought that the reference to the third quarter was helpful there. But, again, I have a great deal of regard for the cumulative wisdom on the other side of that.

With regard to section 3, I, too, believe that there is some benefit to making the change that's suggested in the Bluebook of using the alternative A wording for section 3. The shorter wording does reflect the moderation that has occurred in energy and commodity prices, and it puts the level of resource utilization more front and center as an inflation risk. I also find that it's somewhat shorter, which, in general, I think is desirable.

In section 4, I found the B+ wording attractive because it suggests a concern regarding inflation that I heard around the table yesterday and somewhat of a diminution of deep concern about the downside risks. In a way, I think there is a benefit at the margin to getting away from stock phrases. But I take Governor Kohn's point very seriously that one does that recognizing that there's a potential for unknowable consequences. So while I am marginally in favor of B+, I am more than happy to go with alternative B, either as it's presented, with the switch of section 3, or the new language for section 2. I'm easy, you might say. [Laughter]

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. There has been a lot of interesting discussion so far in this go-round, and I find my own views refining a bit as we go along. The bottom line today is that certainly I agree with everyone who has spoken so far that to maintain the funds rate at 5¼ percent is the appropriate action. The incoming data we have received over the period have not really changed my outlook very much for the economy. Of course, I was a little more optimistic than some of the people last time, and so I'm glad to see everybody has come around to my point of view. [Laughter]

MS. MINEHAN. Beginner's luck.

MR. PLOSSER. That's right. [Laughter] Well, you've got to take it when you can, right? Inflation continues to be higher than I'd like to see, and I still believe there are larger risks on the inflation side than on the growth side. Growth will be slower in the third quarter—we have all acknowledged that. But we also discussed around this table the fact that even the Greenbook is now predicting a somewhat larger bounceback in the fourth quarter; indeed, I remain optimistic that in general the bounceback is going to be somewhat quicker than the Greenbook's forecast. We've had some good news on inflation: It seems to have stabilized

somewhat. But given our earlier pause, extending the pause seems the prudent thing to do from my perspective. If growth as forecast by the Greenbook into the next several quarters remains significantly below trend, actually holding rates steady for a while would be an implicit firming of policy, which may have the desirable effects on inflation that we might need to have in order to bring down inflation. However, if growth bounces back more strongly than the Greenbook forecasts, which I believe is a likely outcome, we may have to consider additional increases in the fed funds rate going forward. Thus, from that standpoint, I really don't view the prospective policy path as particularly symmetric. I believe that the path more likely would be to hold it fixed and allow a weakening economy to somewhat firm policy and do our inflation work that way; or if growth responds more quickly, we may, in fact, have to engage in more firming policy.

As regards the language, I'm a little torn. I'm a bit with President Minehan. I kind of like B, I kind of like B+, but I also worry a bit about the language and the implications it has for the market. I actually find myself in agreement with Governor Kohn on many of his points. I like his prospective change to section 2, getting away from what we think are somewhat unusual factors in the third quarter and not emphasizing that quarter too much. Of course, you might do that by just leaving section 2 almost as it was last time. The only difference is that you're making a statement that going forward the economy seems likely to expand at a moderate pace. The first sentence in section 2 of our last statement, or the only sentence in section 2, really conveys almost the same thing that I think Governor Kohn was trying to achieve, but I'm certainly happy with section 2 as suggested by Governor Kohn.

I believe it's clearly premature to send any signal whatsoever that a rate cut is being contemplated in the near term, which I think is how the language of alternative A, section 4,

would be read. I think that any change in the risk assessment language that would lead market participants to lower their expected path of the fed funds rate would in my opinion be counterproductive. I also think that mentioning the possibility that the slowdown in economic growth will become more pronounced, again as section 2 of alternative A seems to suggest, would be very misleading and would be inconsistent, as has been noted, with some of the optimism expressed around the table yesterday. Thus Friday, when the advance estimate of the third quarter is released, language A would be read as our expecting growth to be less than 1 percent going forward, and I think that's really not what any of our forecasts are suggesting. I believe there is a greater likelihood that growth will be higher rather than lower in the coming months than the Greenbook shows; and unless we see evidence that economic growth is weakening significantly compared with our forecast, lowering the fed funds rate just will not be a very likely outcome. I think we should be reluctant to suggest in our statement that we are now more inclined to lower rates. For those reasons, I really don't favor the language in alternative A. Relative to alternative B, the language in B+, as I have suggested, accurately reflects the view that many of us around the table have—that the data we have seen actually have truncated some of the tail on the downside and that the risk of a really bad outcome has somewhat diminished over the past few weeks. But I'm afraid that trying to use B+ to fine-tune expectations too precisely may create more problems than it solves. So I tend to favor keeping the language as constant as we can. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. My preference also is to maintain the rate at 5¼ percent. For the near-term outlook, I think an important recent development that has been noted is the decline in energy prices. As I said yesterday, lower energy prices do help cushion the effects

of the housing slowdown, and they do reduce the downside risk to growth over the near term. At the same time, by lowering headline inflation, I think they help contain some of the inflationary expectations. So if that rate is maintained, I think we will, in fact, contribute to lower core inflation. By reducing both the downside risk to growth and the upside risk to inflation, the decline in energy prices makes it more likely that we can continue to maintain the fed funds rate at what I've described as its current moderately restrictive level until core inflation returns to more a acceptable level. At the same time, I continue to believe that the upside risk to inflation does remain. The recent monthly pattern in core inflation, while encouraging, does not firmly establish a downward trajectory, which I think is very important to establish. Consequently, I would be prepared to leave the fed funds rate at that level and have it naturally firm as mentioned by others, and I would support additional tightening should inflation reverse course.

Let me very briefly talk about the statement. While downside risks to growth remain, I would not want to convey to the markets the impression that any near-term easing of policy is likely at all. As markets have only recently understood the message in the last press statement, I believe we can best accomplish this by updating the rationale section using the wording suggested in alternative B, section 2. I'm comfortable with the word "moderate." I think Vince gave a good definition of it—at or slightly less than potential. I don't think that word would be harmful at all. But then I would go alternative A for section 3, and I would maintain the wording of the assessment of risk that was used last time. I would not be in favor of modifying the language of the risk assessment in an attempt to get the markets to alter their current views of the expected policy path.

Thank you.

CHAIRMAN BERNANKE. Did you mean to say that you wanted to strike the words in the inflation section? Was that what you were saying?



MR. HOENIG. Yes.

CHAIRMAN BERNANKE. Okay. Thank you.

MR. HOENIG. Thank you.

MR. KOHN. You said you didn't like the word "moderate"?

MR. HOENIG. No, I said I am very comfortable with the word "moderate."

MR. KOHN. Oh, comfortable with it. I'm sorry.

CHAIRMAN BERNANKE. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. As I noted yesterday, I'm more comfortable than I was at our last meeting that economic growth will not deteriorate significantly, and I continue to believe that the risk that inflation will remain higher than I personally desire is still there. So today I support no change in the fed funds rate, and I support the language in alternative B. However, in listening to some of the comments around the table today, I like Governor Kohn's suggestion for section 2. For all the reasons he stated, I think that his suggestion makes it a little clearer than the way it's stated now. I was also going to suggest that in section 3 we use the language under alternative A, as Governor Kohn suggested. As a few others have said, I prefer to leave the assessment-of-risk language unchanged because I'm not sure that much has changed since our last meeting. The Bluebook notes that we could use the B+ language to protest the view that markets have that there is a greater likelihood that we're going to be easing rather than tightening. I'm not sure they are going to view it as a protest, and I prefer to use our minutes and speeches to more fully communicate that sentiment. So for those reasons I'm comfortable with the assessment-of-risk language under alternative B. It's becoming clearer to me that our discussion after this round is becoming more important because the issues we're confronting are what level of inflation

we find acceptable, how fast we are going to get there, and how we intend to get there. So I'm looking forward to that discussion after this go-round. Thank you.

CHAIRMAN BERNANKE. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I support keeping rates unchanged. On the wording, I guess I lean slightly toward B+ over B, but it's not a matter that I feel strongly about, and I could certainly accept either alternative. I remain quite uncertain about how the various forces in the economy are going to play out. As I said in the economic go-round, I think that, if we maintain the current stance of policy, most likely we will get the desirable features of a soft landing with inflation coming down gradually. But I do think there are substantial risks for output growth. I guess they're balanced around moderate growth, but I remain concerned about a downside that would include a period of sustained and significant weakness. On the inflation front, I do think that the risks remain tilted in the direction of higher inflation both because I'm uncertain just how the inflation process is working and because, while I believe inflation will come down, I don't have confidence in the scenario underlying it. If we don't get the play-out of the downside housing risks, I think there is some probability that growth will actually be sufficiently strong that we'll get some upward pressure on inflation from the labor market. We're going to learn a lot by December. A lot of data are coming out that will bear on growth, inflation pressures, the labor market, and so forth. It clearly makes sense to wait.

I guess I'm slightly attracted to B+ over B because I think the language more clearly suggests an upward bias for future rate changes and that does reflect my view of the risks to inflation and the likely path of policy. At a minimum, it seems to push back a bit against the market's view that we're going to be unwinding rather quickly. But I take the arguments that have been made around the table for B as opposed to B+. I'm not sure that there really is much to be

gained by changing the language we have in place on this, and leaving it alone may be the wiser course at the end of the day. On section 2, I think that Governor Kohn made a good argument for changing that language. Again, I could go either way. Finally, on section 3, I prefer the wording in alternative A to that in alternative B. Referring to the high level of prices of energy and other commodities, given that we've had a substantial decline in energy prices, really does seem a bit out of date and a bit out of touch.

CHAIRMAN BERNANKE. Thank you. First Vice President Barron.

MR. BARRON. Thank you, Mr. Chairman. The bottom line is that I'm comfortable with the current policy stance and see no need to move until we become convinced that our forecast for inflation moderation won't be realized. As for the wording, I'm supportive of alternative B as currently provided in the Bluebook. While I'm attracted to Governor Kohn's suggested change, given that it has only been five weeks and there is likely to be some pull-back in the third quarter, I would be inclined to leave the wording as it currently is written. But I would be cautious about changing other wording—again, given the short duration between our last meeting and this meeting and given the lack of evidence that a lot of things have changed dramatically.

As for my reasons, I think that there is clear evidence that output is slowing, but my sense is that there's uncertainty with regard to the degree of the slowdown—that is, how slow we will grow. Despite the output uncertainty, businesses and consumers seem reasonably comfortable with their prospects. Employment gains remain positive, albeit at a slower pace, and income and spending continue to grow. There are, however, real-side concerns in the housing sector, yet none of these scenarios we've run seem to suggest anything approaching a recession-level slowdown. Concerns remain weighted toward an upside risk to inflation, but not necessarily one that demands immediate action. Despite the concerns on the inflation front, I think we can afford to wait a bit longer so that

we can assess the actual outcomes regarding inflation and output, see how they match up against the forecast, and then determine whether the current level of the federal funds rate provides enough restraint to reduce inflation. Thank you.

CHAIRMAN BERNANKE. Thank you. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. Given our decision to pause a couple of meetings ago, I don't think that we should move rates today. We've made only small changes to the outlook since our last meeting, and we're still facing an uncertain policy environment. I'm feeling a bit more comfortable about the resilience of the real economy, as I mentioned. Still, I recognize it could be a while before we have a reasonably clear picture of how the correction in the housing markets is playing out. With regard to inflation, it's true the past three months of price data were better than the previous three, but as we have pretty much a consensus here, it's still way too soon at this point to say that core inflation has peaked. My basic thinking about inflation has not changed: It's too high, and I see a significant risk that it will not come down fast enough. I just want to refer back also to the medium-run scenarios in the Bluebook. Remember we had those two targets, the 1½ percent target and 2 percent target. You recall that, depending on which target you chose, you had a different series of policy actions early next year. So I think our discussion about communications later today will have some relevance for our near-term policy decisions as well as our longer-term communication strategy.

In terms of the language, let me go through it section by section. In section 2, I like the change that Don Kohn suggested, saying that economic growth has slowed over the course of the year instead of referring specifically to the third quarter. There's no major benefit in singling out the third quarter. The substitute sentence accomplishes much of the same thing that pointing to the third quarter does, and so I like that change. About the second sentence in section 2 and the

questions as to what the word “moderate” means, I can see there will be some confusion here. Coming into this meeting, I thought “moderate” meant “below potential” not “at potential” because “moderate” to me means good but not great. That’s the way I interpreted it, and I would assume that market observers and Fed observers are going to be doing exactly what Vice Chairman Geithner did—

VICE CHAIRMAN GEITHNER. Professor.

MR. MOSKOW. Professor. [Laughter] Professor Geithner did, saying, “what’s the dictionary say?” They’re going to be rushing to the dictionary to figure out what “moderate” really means here. So there’s confusion about the definition. Then there’s the confusion that was pointed out about what the baseline is—from where; from the third quarter; from the average of the first three quarters? I think these are valid critiques. I think we can say the same thing for the word “improved,” though I don’t think that helps us. I guess I’m not happy with the sentence, but I can’t think of a better way to improve it at this point except to drop it completely. On section 3—I agree that alternative A is better than alternative B, to take out the reference to energy in that first sentence. Then in section 4, I like the language of B+, but it’s a close call as to whether or not this is the time to make that change. I guess I have a slight preference for leaving it the way it is now. I just don’t think this is the time to make changes in section 4, and we’ll certainly have another chance to revisit this at our next meeting.

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. There’s more discussion about the word “moderate.” It occurs to me this arises also in other contexts. Do we really have to speak in code words? If what we mean by “moderate” is that we believe growth will be near trend or near potential going forward, why don’t we just say that? It’s just a suggestion.

CHAIRMAN BERNANKE. That would break many years of tradition. [Laughter]

MS. MINEHAN. Just say “slightly” or “somewhat moderate.”

CHAIRMAN BERNANKE. That’s okay, President Plosser. You’re new. [Laughter]

MR. PLOSSER. I’m a bit of a slow learner, but I’ll catch on.

CHAIRMAN BERNANKE. I see a two-handed intervention from President Poole.

MR. POOLE. As he was speaking, I started to write exactly, “Couldn’t we just say the economy seems likely to expand at a pace at or slightly below potential?” That’s what we’re all saying we mean. Why not say it?

MR. HOENIG. So long as we don’t get sidetracked onto what “potential” is at this point.

VICE CHAIRMAN GEITHNER. Why don’t we say, “Whatever that is”? [Laughter]

MS. MINEHAN. You fill in the blank.

CHAIRMAN BERNANKE. Good suggestion.

MR. MISHKIN. This is going to come up later. There are real issues about using the word “potential” that I think will get us into trouble. So I’m sympathetic to your view about being clear, but I think we had better wait on this. It’s something that’s more complicated than I think we want to deal with at this stage.

CHAIRMAN BERNANKE. All right. President Stern.

MR. STERN. Thank you, Mr. Chairman. First of all, I support maintaining the federal funds rate at 5¼ percent. Second, I have some concerns about editing on the fly. I’m not sure it leads to effective communication, but since that’s the game we’re playing, [laughter] I will enter into it, albeit a little reluctantly. With regard to using alternative B as the framework, in section 2, I favor the Kohn-Kroszner change mainly because I think it puts a little less emphasis on high-frequency data and, other things being equal, the less emphasis on that the better. In section 3, I do

think the expression under alternative A is preferable over alternative B for the reasons that President Yellen identified. It seems out of touch to continue to talk about high energy prices. Yes, they're high relative to history, but they're not high relative to the past ten or twelve months. I might like to say something more artful about resource utilization, but I think that's a battle for another day, and I'll avoid that. As far as section 4 is concerned, like others, I find that a very close call. I may just have my own view of policy, which leans slightly toward B+, but I don't know how much we gain by making the change at this time. But if we don't want to do it today, we might want to think about doing so in the longer term. Making more-frequent language changes may have some advantages because it may mean that any change carries less weight with it. We seem to have gotten ourselves into a position in which it's very hard to change even an adverb or an adjective without worrying a lot about what people in the financial markets are going to make of it. I'd like to find a way out of that position, and one logical way out of it, I think, is to make changes more frequently and make clear that it's the way we're going to operate in the future and that these particular words don't carry an excessive amount of significance. If we don't want to do it today, I also would favor B+; but it's something I think we need to think about. Thank you.

CHAIRMAN BERNANKE. I think the communications subcommittee should take that under advisement. [Laughter]

MR. STERN. Good idea. [Laughter]

CHAIRMAN BERNANKE. Governor Bies.

MS. BIES. Thank you, Mr. Chairman. First, I support leaving the fed funds rate unchanged at this meeting. I've puzzled over section 2, and I like what Governor Kohn has suggested because one of the challenges I have had in this whole thing is what I heard around the table yesterday, which in general supports the conclusion I've been coming to. We really are going from very rapid

growth to slowing, but if you parse out the pieces, what's really changing is housing. The rapid growth from 2003 to 2005 was due to unsustainable housing construction; it's coming down, and it's a big chunk of that change. Now, other sectors have noise or are weak. Sectors like autos and exports are jumping around, but it's housing that has to adjust. I think it's going to run below trend as the Greenbook says. At the same time, as we all were mentioning yesterday, we have tightness in the labor market, which again signals that in most sectors of the economy it's hard to find people who are available to work to sustain the economy. It's almost as though we have a dichotomy right now whereby housing is running below trend but the rest of the economy is running at or above potential. So I think it's important to leave in the comment about the housing sector—that is what we're focusing on. To me that is bringing the aggregate number below potential and is moderating the growth rate. But in terms of the way to go on section 2, I can go either way. I do like the change that Governor Kohn suggested in section 3. I think that is a good change. I believe that we should not change section 4, the assessment of risk, at this meeting. It has been only five weeks. We've had a discussion about changing more frequently; again, I think we ought to leave that to the communications subcommittee to think about. But I think we ought to leave it as it is because it says what we really mean. The first sentence says that there are inflation risks, and that's a sense that we need to convey. Too much could be read into a change that may be unintended, and so I'd rather just at this meeting leave it the way it was at the previous meeting. Thank you.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. Many of us have said that inflation is too high. Many of us have said it recently in public, and I haven't heard any of us say that we're satisfied with inflation being 2¼ percent indefinitely. But public expectations clearly seem inconsistent with core inflation returning to below 2 percent in a reasonable amount of time. We've tried to communicate our



concerns about inflation, but that effort has fallen short. We intended the August decision to be a hawkish pause, but I think it's fair to say that the markets overlooked the hawkish part. Markets subsequently came to believe that a set of rate cuts were in store early next year. In recent weeks the policy path has moved up a bit, but I don't see any evidence that people expect us to bring core inflation down below 2 percent anytime soon. I think communicating collectively and more explicitly about our intentions would surely help the situation. We're going to discuss that later today, but in the meantime, we have to make policy the old-fashioned way, based on our own implicit or explicit individual targets and our own sense of the appropriate way to achieve them.

My own assessment at this meeting, as it was at the last two meetings, is that a further tightening is needed to help ensure that core inflation declines to an acceptable rate in coming quarters and that the real economy can withstand a further increase in the fed funds rate. Discussion with staff yesterday made it quite clear that, in their view, inflation will not come down below 2 percent anytime soon without our doing something about it, and that's a view with which I concur.

Now, reflecting on the results of the last two meetings and the discussion I've heard so far, my sense is that there's a decent probability that I'm going to be outvoted again today. [Laughter] I understand and respect the arguments for pausing now. The housing slowdown is weakening demand growth, and at times weaker demand growth warrants a lower real interest rate, all else being equal. I could put that into the output gap or the Phillips curve language, if you want. I recognize that under flexible inflation targeting, if that were our agreed-upon strategy, it would take time to bring inflation back down to target, and the speed at which one did so would depend on the state of the economy. But in my view, the rate of convergence embodied in the Greenbook forecast and the Bluebook extended simulations is too slow and risks that inflation will become even more

entrenched than it is now. I think bringing inflation down more rapidly than that would be both feasible and appropriate, and I hope you can appreciate that, given the limited data we've seen since our last meeting, I'm reluctant to signal that my concern about the trajectory of core inflation has in any way diminished. Accordingly, I favor alternative C.

For those of you supporting alternative B, it's hard for me to see that market policy expectations, even after the adjustment of the past few weeks, are consistent with the views I've heard you express around this table. So I would think you would want to enhance the alignment of market expectations with your views by tweaking the statement in a more hawkish direction.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. I support no change at this time. As many people have said, we've had very little new information to change our views from the last meeting, and I think that the position that we're in is consistent with growth a tad under trend potential, whatever word we might want to use. I share Rick's caution about being too explicit about that because I think there's a lot of controversy about what that precisely means, and I don't think we want to get into that in this statement or at least not at this point. Also, we have seen some inflationary pressures come off. Inflation has been evolving a bit as I expected. I was talking about the temporary factors versus the more-permanent factors. The key temporary factor seems to have been a temporary elevation in owners' equivalent rent and the way we put that into our core CPI and PCE; so some of it is a measurement issue. Some of it is a transition in the housing market away from purchases toward rental. That seems to have come off a bit, and so going forward, it does seem as though we're unlikely to have that continuing at elevated levels.

My concern, as I mentioned yesterday, is that I don't understand the path or the dynamics going forward. Certainly we have some simulations in the Bluebook which are very, very sticky.

Inflation seems to evolve very slowly, or very little seems to affect it. Part of that seems to be, if we look at the data, that the energy price run-up appears not to have pushed much on inflation, so I don't think we can rely on the energy price decline to give us much benefit in terms of core. Recent data on output gaps don't seem to suggest that there's much empirical evidence that a change in the cyclical behavior of the economy is going to have an important effect on inflation. Expectations certainly potentially have a very important effect, and I think we have seen a reduction in inflation expectations and inflation compensation, both in survey measures and in TIPS spreads or other market-based measures. But as I mentioned yesterday, that is a very fragile thing. The process is something that I don't fully understand. Obviously, our credibility is very important, and our statements are very important. But it does seem as though the minutes and speeches have helped to clarify what our position is. If you look at the evolution of the expected fed funds rates in Vince's exhibit 1, you see that not much change has been expected over quite a bit of time now and maybe 25 basis points is expected a year hence. That position is different from our position a few months ago. I think it's an appropriate position given our discussions. It leaves us a lot of flexibility to respond either to surprisingly strong growth, to surprisingly strong inflation numbers, or to surprisingly weak housing. So I think that market expectations are in a reasonably good position in the near term. We do have to think about the longer-term issues that President Lacker has raised and that may come up in our discussions of communications.

Speaking of communications, in particular the statement—we've been talking a lot about how the Committee is focused on data and the role of data and our forecasts. Because not much data have come in and our views have not changed a lot, I think we should not be changing the statement much. That is consistent with our view that we are really focusing on the data. In particular, I don't like speculating about a particular number, especially when that number is going

to be revealed in a few days, for three reasons. One is the potential embarrassment factor if we've missed the number. The second is that, even if we have very high confidence that we have gotten the number roughly right, getting it right only feeds the view that a lot of market participants have—and I'm sure you've all heard this—that we know something the rest of the world doesn't, that we know these data before the rest of the world. I don't—maybe some of you guys do [laughter]—at least the staff has not revealed any of that to me. Third, what we've been trying to say is that we look at a mosaic of data; we don't look at any one piece, and to emphasize one piece is problematic. So that said, obviously the type of approach that Don was discussing is one that I would support. But I do think it is very important to make sure that we have a good understanding, in the context of that statement, of what “moderate” would be interpreted as. Obviously it will be very important in the minutes to make very clear what that is, and obviously with our blackout period, it will take us a while before we can make explicit statements if there's confusion in the market. So I do think we need to think about the interpretation of “moderate.” However, I like the idea of conveying that the economy is likely to be coming back, perhaps not at the robust pace that we've seen in the past but at a reasonable or moderate pace.

Given that energy prices and commodity prices have come down, we should be taking out that energy prices and commodity prices are pushing up inflation or seem to be sustaining inflation pressures. Also given that we have not seen much change in the data or have not made much change in our approach, there's really no reason to change the assessment-of-risk discussion, particularly as the markets seem to be interpreting our assessments roughly where we think is reasonable considering the risks going forward. If the markets were interpreting things as they had been interpreting them a month or two ago, we may have wanted to change our statement, but I see no reason to do that now.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. I support keeping the federal funds target constant. Let me enter the fray about language by stating the opinion that we should change language if we think the markets do not understand our views. We shouldn't change language just because the market disagrees with our views. So regarding the distinction between B and B+, I think because of the minutes and because of the speeches that many of you have given since the last meeting, the markets hear what we're saying about inflation; they just simply don't agree with it. I feel very comfortable with that. That is, we have told them that inflation is our top concern. They are very smart, and it's not, in my judgment, essential that we somehow match the markets' expectations to our own. Our obligation is to tell them really what we think, and frankly, it is quite helpful for them to be coming to an independent view. So without going to the distinction between B and B+ about whether we should change language, I don't see any compelling reason, in light of their understanding of where we are, that we should be changing to the somewhat more hawkish description in B+. As I've said before, the language should not be an attempt to rewrite what we could have done better or could have done differently last time. It has to be a view of, given where we are, what the incremental benefit of change is. Thus I favor relatively strongly not making the change to the B+ language that Vincent forwarded yesterday. The markets are most focused on growth, as I talked about yesterday. The suggestion that Don made about alternative A, section 3, language is perfectly appropriate, and I think it is reconciled and shared by everyone here.

So let me go to alternative B, section 2, language and try to make my views clear in terms of the changes that have been suggested. First, if instead of describing economic growth in the third quarter we refer to economic growth over the course of the year, my concern is that the markets will then see what gets posted as the third-quarter number and will think that we think that growth is

going to continue to be weak in the fourth quarter. So even though I don't like pinpointing a particular time, I get a little uncomfortable if we use the first sentence to say that economic growth has slowed further through the present, that is, a 1 percent number gets posted on Friday, let's say, and then that will be read to say the Committee believes that that is the trend for the fourth quarter. Then couple that sentence with the next, in which we say "going forward." I think "going forward" then largely means 2007 because we've opined in the first sentence on the third and fourth quarters. I think the general view will be that the "going forward" sentence will relate to 2007 and we will have left some misunderstanding about where we collectively are on fourth-quarter GDP, and the markets aren't going to have that just right. So I would leave the language in the first sentence referring to the third quarter. Sharing the view that many of you have that "moderate" is not as clear as we'd like, I think we want to have the first sentence end with the third quarter and have the next sentence then talking, in effect, about the fourth quarter and beyond. Then because I can't come up with a better word than "moderate," I would suggest the following: "Going forward, the economy seems poised to expand at a moderate pace." Again, I'm trying to suggest some optimism, some inflection point there. The other language I've messed around with would be "poised to return to a more moderate pace" or something else along that line. But I think we're trying to show an inflection point, so that would be my modest suggestion for that. All in all, the markets are going to be most focused on our growth statement. So even though we've spent a lot of time on wordsmithing, I think it is quite important. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. I see the data that have come in over the past five weeks as indicating that the economy is actually evolving in a way that I find quite attractive. In that sense I hate to use this language, but I think it's actually appropriate: I think the right language is "stay the course."

[Laughter] In that regard, in terms of the statement, we want to modify as few words as possible. Clearly it makes sense not to mention energy for the reasons that have been discussed, but I think the right way to let the markets know where we are is that basically we've paused in the last couple of meetings, that pausing has actually worked out quite well, and that we'll wait to see how the data evolve. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman Geithner.

VICE CHAIRMAN GEITHNER. I am, as I think the center of gravity in this Committee is, somewhat uncomfortable with the amount of moderation that the Greenbook expects to see in core PCE inflation, and I'm somewhat uncomfortable with the view that, with the markets' expectations for the fed funds rate, we're going to see enough moderation of inflation. We can't be that confident—even if the fed funds rate stays constant, as the Greenbook suggests, over the next few quarters—that we will get the right amount of moderation. So I think the range of plausible outcomes for monetary policy is likely above the path that's now priced into the markets, maybe somewhat above the assumption that underpins the Greenbook. I'm not confident that we can effectively alter those expectations or calibrate our signal in a way that can engineer that kind of desirable change two to three quarters out in the expected path of the fed funds rate. I don't think there's a good case for moving policy today, of course. I think the first sentence in C is sort of what we meant in August, and if we had used it then, I'd be in favor of using it today. But I don't think there's a strong case for putting it in today on the grounds that I don't know that, on the basis of the evidence we've seen over the past five weeks, we can justify what would be interpreted as a significant firming in the signal the Committee is sending. I also think it has the slight disadvantage of maybe being harder to extricate ourselves from than the current formulation. Having said that, I think the signal needs to be asymmetric and the risks are still asymmetric. We should be more

worried about the risk that inflation doesn't moderate enough than we should be worried about the other risks to the forecast.

I would be reasonably comfortable with the changes to sections 2 and 3 that Don proposed. I have some uneasiness about whether section 2 as modified conveys the sense that, if you look through the adjustment we're seeing so far, we have growth strengthening from the pace in the second and third quarters to a level that's at or close to potential, and I do think the sense we want to convey is pretty close to what Charlie, Bill Poole, and perhaps Kevin in a sense said. But I just don't think we can at this time wade into a characterization of potential or what's sustainable without the risk that we'd regret the formulation that we used. So on the grounds that I don't have a better alternative, I would support the modifications to sections 2 and 3 and leave the risk assessment in section 4 unchanged. I think that will leave us in a pretty good position. We should be pretty comfortable with where we are, but I do think the plausible scenarios for what we're likely to do with the fed funds rate lie above what's now priced in the market and maybe above the assumption that underpins the Greenbook forecast.

CHAIRMAN BERNANKE. Vincent.

MR. REINHART. Who says 18 people can't draft a statement? [Laughter] I have some late breaking news. If you go to the dictionary, the first meaning of "moderate" is "being within reasonable limits," which I believe is what Governor Kohn was referring to. But it also means "of limited or average quality," and in the federal statistics, there is a term of art, "moderate income," which refers to households supported by average or slightly below average income. [Laughter]

CHAIRMAN BERNANKE. That was truly amazing. [Laughter] President Fisher.

MR. FISHER. Mr. Chairman, I'd like to just go back and endorse Governor Kohn's recommendation. I was worried about the numerator/denominator relationship. If the reference to



“moderate” as defined and clarified by Vince keys off the third quarter, then I’m concerned. If, however, we take the phraseology that Governor Kohn suggested, I think it would be acceptable.

CHAIRMAN BERNANKE. Thank you. Well, thank you all very much for a very useful, very informative discussion. My bottom line is that we have not had a great deal of information in the past five weeks on which to base a sharp change either in policy or in this statement. Therefore, I would propose that we make no change in the federal funds rate target today.

Many of the issues that were raised yesterday were in some sense prospective. Will the housing market decline further or stabilize? Will labor markets strengthen or weaken? Will growth slow or return to potential? Over the next six or seven weeks, until the next meeting, we’ll be seeing the employment cost index, the third-quarter GDP, two employment reports, and a raft of data on housing prices and other key indicators. So I think it would be sensible to think very hard in December about whether a course adjustment is necessitated both in terms of policy and in terms of the statement.

I would just say that Governor Warsh’s comment about the markets was one that I’ve thought about myself. If the markets disagree with you, do you try to persuade them or not? I think the ideal thing is, again, to convey strongly what our views are—in particular, both our objective function and our outlook—but in general not to try to directly influence the position of the yield curve because doing so makes us lose an important source of information about the economy. However, in the intermeeting period we can continue with our verbal tightening in the sense that we can emphasize our ongoing concern about inflation and the pace of change in inflation, and we can convey, those of you who believe this, that the risks to lower growth seem to have been at least somewhat moderated.

With respect to the language, I've been trying to keep track here, [laughter] but I think I have a clear majority in the third section to strike "and of the prices of energy and other commodities." I heard no disagreement there. The Kohn amendment seems to have a majority. Governor Warsh raised some of the issues that I thought about in trying to distinguish the third quarter from the fourth quarter. I guess I'm okay with Governor Kohn's suggestion. Is there anyone who would like to re-enter this discussion after hearing the whole thing? If not, I take the general thrust to be in favor of making that change.

CHAIRMAN BERNANKE. Is there a comment? Yes, Governor Kroszner.

MR. KROSZNER. This is certainly something that I am very supportive of, but as I had mentioned, I was concerned, as Governor Warsh and others were, about the interpretation. Would it make sense to use the word "poised" rather than "likely," or do you think that would be a mistake?

CHAIRMAN BERNANKE. I think "poised" suggests in the future even more than what we already have. Frankly, this may or may not occur, but I think that second sentence, "seems likely to expand at a moderate pace," is actually a fairly hawkish sentiment because it will tell the markets that we are less concerned about a meltdown in housing than many people in the bond market appear to be. So I guess I don't see the advantage of "poised." I think "moderate," even without Vince's very appropriate intervention, does convey the sense of reasonable, near trend, certainly greater than 1 percent. So I do think it's a reasonable suggestion. We will, of course, be talking in subsequent sessions about how much more we want to go into forecasts and how much more explicit we want to be about those things in the future, and that will be a point for significant discussion.

On the risk assessment, section 4, a few people expressed interest in B+, but I think the overwhelming sentiment was that changes in this case would be somewhat risky, and so the status

quo seems to have the majority. Again, it will be a very interesting intermeeting period. We'll see what the data are, and we'll also see how the markets respond to those data. As President Poole pointed out, if the data are exceptionally strong, I think the markets will anticipate our action and begin to move financial conditions in the appropriate direction. So that's my recommendation.

Would anyone like to comment? If not, Ms. Danker, could you call the roll?

MS. DANKER. I'll be reading the directive wording and the risk assessment for alternative B 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."

Then the risk assessment:

"Nonetheless, the Committee judges that some inflation risks remain. The extent and timing of any additional firming that may be needed to address these risks 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 |
| Governor Bies          | Yes |
| Governor Kohn          | Yes |
| Governor Kroszner      | Yes |
| President Lacker       | No  |
| Governor Mishkin       | Yes |
| President Pianalto     | Yes |
| President Poole        | Yes |
| Governor Warsh         | Yes |
| President Yellen       | Yes |

CHAIRMAN BERNANKE. Thank you very much. It's 10:30. Why don't we take a fifteen-minute coffee break and return for our discussion?

[Coffee break]

CHAIRMAN BERNANKE. The meeting can come to order. This portion of the meeting is devoted to a discussion of communications. Governor Kohn, could you lead us off?

MR. KOHN. Thank you, Mr. Chairman. I'd like to say just a few words by way of introduction about the expectations for today and the process going forward. Today we're approaching the general topic of communications, but also I think everyone agrees that today's discussion, in particular, is about more than communications. It's about the regime, how we run policy, to an extent. So we will get into that.

We've been approaching this topic in a very gradual, deliberate way. These issues are important, and I don't think there's any rush. There's nothing that we're doing now that is so severely broken that we have to fix it in the short run. We want to consider these issues, as we have discussed in the past few meetings, on a number of fronts, and the areas in which we may be changing—the numerical specification of price stability, the forecast, the announcement, the minutes—are all interrelated. We want to end up with a program across all these things that makes sense, is coherent, reinforces itself, and balances all the various considerations that we talked about at the last meeting with principles that should guide these things. We need to look at the individual pieces and then the whole package, make sure we understand the implications, and prepare the public and possibly the Congress for some of the changes we might make. So I see this process as very deliberate in typical Federal Reserve style, and I think that is justified in this case. One thing we've discovered about communication policy is that, once you make changes, they are really hard to take back. So we need to get clear among ourselves what we are doing, why we are doing it, and what the implications are for our own deliberations, for our communication with the public, and for the material we might get from the staff for meetings.

As for today, the issue on the table is the numerical specification of price stability. Vincent has circulated a memo with a decision tree in it raising key questions, and I hope we come out of this meeting without a decision. I think making a decision today would be a mistake because what we're going to talk about today will be related to things we'll talk about in the future. But if we could get a sense of the center of gravity of the Committee on the various questions that Vincent has raised and other key issues that you want to raise in connection with this particular topic, then we will get some sense of how we want to move forward both in terms of staff work and in terms of future Committee discussions.

We have a two-day meeting scheduled for January, and our thinking on the subcommittee was that we would devote that extra day to a discussion of the forecast and projections. How can we make them potentially more useful? What about how we explain them in the Monetary Policy Report? How might they fit into the announcements as well as into the Monetary Policy Report? That area has a huge potential for clarifying the Committee's thinking to the public, but it also has a lot of challenges regarding how to go about that and preserve the diversity of the Committee, which so many of you discussed at the last meeting.

If the center of gravity of the Committee today is leaning toward going forward with a numerical specification of price stability, we would expect to come back to the Committee at the subsequent two-day meeting in March with some specifics on how we would go there and some of the choices we would have. We'll probably need some staff analysis to back that up. We had a lot of analysis a year and a half ago or almost two years ago, but I'm sure we will need some more pieces to back that up. So my bottom line here is that we're just trying to get a sense of where the Committee is going. This is a deliberate and deliberative process that will take a number of months, if not quarters, to get to a place with which we're comfortable.

CHAIRMAN BERNANKE. Thank you, Governor Kohn. Let me just add a couple of comments. I'll talk more substantively at the end of the round, but I just want to say that I'm looking forward to the discussion. I think we're going to learn a lot. Our objective should be to find a package of measures that will improve our communication and our policy effectiveness, but I hope also that we will find something that will attract a broad support and consensus around the table because we really need to have the whole Committee behind this kind of thing, if at all possible.

I know the focus today is on explicit specification of a numerical definition of price stability. Certainly in my case, and I'm sure in many of your cases, the interest in that depends a lot on interactions with other elements of the package—for example, projections. If that's important to you, I hope that you'll refer to it because I do think we'll have to proceed on some of these other elements as well.

Let me conclude by reiterating a point that Governor Kohn made, which is that we will not be making any decisions today. I ask you please not to give the impression to the outside world that we have made decisions because the process is going to be extended and gradual and we want to make sure both that all the pieces of whatever it is we decide to do are coherent and that we're all comfortable with the plan. So with that, I will simply ask people to raise a hand if they'd like to speak, and we'll go around the table.

VICE CHAIRMAN GEITHNER. Mr. Chairman, may I ask one clarifying question? Will someone remind us how the minutes are going to characterize the conversation we will have over the next several meetings? Is it going to be a standard section like the one we used the last time, which was pretty much without content? [Laughter]

MR. REINHART. Since you're not likely to be making any decisions, then there's not much to convey in the minutes other than that you had a full and frank exchange of views [laughter] regarding your attitudes toward articulating a price objective.

CHAIRMAN BERNANKE. Good. So we'll proceed on that understanding. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Vince Reinhart did a good job of organizing the issues in his three fundamental questions, but I'd reverse the order. The last of his three questions asks whether adopting a numerical objective would constrain or influence subsequent policymaking. I think we should start by asking the question what constraints we want to impose on ourselves and then work backward to what kind of inflation target would provide constraints that we view as useful. In other words, what discretion do we want to convince people we will not use, or to put it yet another way, what monetary policies do we want to rule out for ourselves? It's fairly self-evident that giving up at least some monetary policy discretion is useful, and in fact we've done this. After all, our success in bringing down inflation under Chairmen Volcker and Greenspan was achieved by giving up the discretion to follow pre-1980 style policies in which trend inflation drifted upward and by giving up the discretion not to respond forcefully enough to inflation scares.

Regarding an explicit inflation objective, let me again start by considering the expected value of one-year inflation beginning  $n$  years ahead, where  $n$  is, say, ten years or more. This number can be taken to represent expected long-run inflation, and we can make it anything we like—take that as a kind of postulate. I don't know of any economic reason for expected one-year inflation beginning ten years from now to vary materially over time. In fact, fluctuations in expected long-run inflation impede the effectiveness of financial markets and reduce economic welfare. Moreover, as a matter of public accountability in a constitutional democracy, we owe it to

the citizens of the United States to tell them this simple and yet very important implication of how we conduct monetary policy, if only to make the use of retirement-planning software easier.

[Laughter] So I presume we'll be able to agree that we want to give up the discretion to pursue monetary policies in which expected long-run inflation varies over time. Ultimately we need to choose a number for what measured inflation rate corresponds to price stability.

Beyond choosing a specific number, however, I think the more challenging choice comes when we talk about time periods. Over what time period should we say that we intend to have inflation return on average to our long-run objective? In other words, how fast should that convergence take place? This question is critical and substantive, and it's going to require careful analysis and consideration. On the one hand, the time frame should not be too short. Obviously, saying that inflation should return to target next month would have us giving up too much discretion. On the other hand, setting too long a time frame will not do enough to stabilize inflation expectations. Moreover, the longer the time frame that we set for returning inflation to target, the harder it's going to be for the public to verify our adherence to an announced target and, thus, the longer it may take for us to establish the credibility of our announced intentions.

The approach I've outlined here by starting at the back and inverting Vince's question 3 has some implication for Vince's question 2: How should the FOMC choose an inflation objective? In general, since the economic benefits of numerical objectives stem from reducing unnecessary uncertainty, we maximize those benefits when we make the choice of objective more permanent and less subject to reconsideration by our future selves. This suggests making a numerical objective as close as possible to a once-and-for-all choice or decision, for example, by having the inflation target explicitly voted on once by the Committee when adopted and not reconsidered annually. Related to that, an explicit Committee decision, it seems to me, would be preferable to amalgamating



members' forecasts and preferences as in the relatively opaque Humphrey-Hawkins process. The latter would have the potential for generating objectives that vary over time with Committee membership.

Let me briefly make just a few other observations that I think are related to this. First, after we initially announce our adoption of an inflation objective, assuming that's what we do, we will need to act and speak in a way that's consistent with our announcement. That's sort of obvious, but our announcement by itself is not going to convey instant credibility. It will be essential that we follow through. Second, while our announcement will no doubt convey a general sense of what it will mean for conducting monetary policy, how we actually make monetary policy immediately following the announcement is going to demonstrate to people what we think it means—in other words, how it's going to constrain us in practice. So we should think about adopting an inflation objective as consisting of two sets of things—an initial statement and the way we subsequently act and communicate—and I think we should discuss those both. Third, I'm in the camp that believes that adopting an explicit inflation objective could improve interactions between the staff and the Committee by providing guidance as to what analysis is most useful to us. For example, the staff might routinely report alternative simulations of more or less aggressive approaches to returning inflation to target over time, as in the Bluebook. Finally, regarding the question of whether unilateral adoption is consistent with our legislative framework, I was not privy to your private conversations last November, Mr. Chairman, but your nomination hearings appeared to provide the Congress with an opportunity to object, if they were so inclined, to unilateral adoption of an inflation target by the Federal Open Market Committee. I take the fact that they did not do so, at least publicly, as evidence that they would view a numerical inflation objective as broadly consistent with the wide latitude accorded to us by our existing legislative mandate.

I recognize that some cite the so-called dual mandate as a reason to question whether we can adopt an inflation target without a more-formal mandate to do so from the Congress. But in the past we have made a great deal of effort to communicate; to educate the public about the relationship between inflation and output, the two of our three mandates that enter in here; and to convince people that we contribute best to keeping output growing at a maximal rate by keeping inflation low and stable. Moreover, we can make the average inflation rate, long-run expected inflation, anything we want. That doesn't hold for employment growth or output growth or the unemployment rate. Those are my remarks, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you, President Lacker. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. It's probably best to state at the outset that I prefer a different approach to quantitative inflation guidelines, and that approach is actually touched on in Vince's second question. The approach I would prefer is extending our economic forecast horizon. I'll address this consideration first and fill in some of the details requested by Vince and the subcommittee, and I hope we would consider this option going forward.

Moving to an explicit numerical specification of price stability would be a very big step for the Federal Reserve, for this Committee. Once we do that, as Don said, there's no turning back. So this decision is extremely important for the Committee. To date, when we've been faced with major decisions of this type, we have taken an incremental approach, and I think that approach has served us very well. For example, we have increased transparency step by step over the past twelve years, and I think that approach has really been quite successful.

So I'm attracted to an intermediate step of extending our economic forecast horizons. I think doing so would be a natural extension of what we already do, and it would give us experience with many aspects of the quantitative inflation regime. My preference would be to extend the

economic forecast to a horizon that is at least five years ahead. At five years out, the inflation forecast should be close to our implicit inflation guideline. Output growth and the unemployment rate should move around only with regard to structural changes, like demographic changes and total factor productivity growth, for example.

I realize that many details would have to be addressed to extend the forecast horizon, but figuring them out and getting experience with this approach would help us to learn what's involved in moving toward an explicit numerical objective or to learn why not to go that far. First, what is the policy assumption underlying the forecast? Second, we currently report GDP growth, the unemployment rate, and core inflation—so how many variables would we report? Third, should we continue with our current approach of using a central tendency or develop an integrated consensus forecast? Fourth, should we convey uncertainty bands around that forecast at the longer horizons?

I realize these questions are difficult for us to answer as a Committee, but there are other tough challenges in moving to an explicit specification of price stability. For me the biggest issue is the dual mandate responsibility and our relationship to the Congress. Clearly, a persuasive case must be made that we will continue to fulfill our dual mandate responsibilities. The challenge is how to make an explicit numerical specification of price stability operationally compliant with the dual mandate, and to do so, we need to clarify the flexibility of the time period for bringing inflation back to its target, as Jeff just talked about. The amount of time to do this would depend on the size of the current inflation deviation and the deviations from maximum sustainable growth and employment. So I think the intermediate step of explaining longer-term forecasts would help us learn how to communicate these difficult dual mandate issues more effectively.

Let me cycle back to the questions in Vince's memo. With regard to the first question, I think that further clarification of our price stability objective would be helpful and that extending the

forecast horizon is a good first step. Providing more information about our long-term inflation goals should help us maintain or even reduce the currently low inflation risk premiums in long-term nominal financial contracts and interest rates. These inflation premiums are risk compensation against the economic outcomes that we have a lot to say about. The long-term inflation information will greatly facilitate communication both within the Committee and externally. I have expressed my views on explicit inflation objectives previously. Just to summarize, economic theory does not sharply pin down the optimum inflation rate, but my preference is a range of 1 to 2 percent for core PCE inflation. My preference is for core inflation to be 1½ percent, in the center of that zone. When inflation is outside the zone, policy should be broadly designed to move inflation back to the center of the zone. However, the time frame for core inflation to return to the center of the zone depends on a number of factors, like the dual mandate that I mentioned earlier.

Finally, an important issue that we should discuss is whether to use core inflation or headline inflation. Other central banks use headline inflation, and they seem to manage that well. I'm open to a discussion on this, but I think the communication issues are more complicated for headline inflation when it deviates so much for transitory reasons than for core inflation. To conclude, I favor taking the intermediate step of extending the forecast horizon to five years, and I'd like to leave open the question of whether to establish quantitative guidelines until we get more experience with that approach.

CHAIRMAN BERNANKE. Thank you. President Poole.

MR. POOLE. Thank you. I want to associate myself with comments that President Lacker offered. If we are going to do this, we ought to make it very clean and explicit. I would not favor the approach that President Moskow offered because calling the target a forecast leaves too much

room for it to change over time. I think that the central idea of a target is that it is a long-term commitment and not something that ought to change with each new FOMC that comes in.

I believe that a coherent policy for the FOMC requires that the Committee at least act as though it has an inflation target. We can't have a coherent discussion if Charlie Plosser and I are both favoring zero percent and other people are favoring 2 percent. I have often said that I would like zero properly measured, but I think it is far more important to have any reasonable, low range and to say exactly what that number is. I think we ought to be able to do that.

I have said that the target range should be understood to be permanent unless developments in the literature and the theory suggest that it needs to be recalibrated. As a matter of governance, each incoming FOMC is going to have to reaffirm that range, but I think it would be understood that there would not be a change without substantial analysis and communication with the general public. In fact, the constraint that there would be communication with the general public would produce a very, very high hurdle for even discussing a change. I think that would be appropriate because discussing a change on the inside and springing it on the general public would not reflect good monetary policy.

I also believe that there's good reason to adopt an inflation range sooner rather than later. I realize that we need a deliberate process here, but I would argue for doing it sooner, first of all, because our new Chairman has views as an academic that are well known on this subject and because we have been discussing it for some time. Also, we have an opportunity—whether it would be successful I don't know but we shouldn't pass it by—to help deal with the current inflation environment. It is true that, if you take the staff model and arbitrarily dial down the inflation expectations that are embedded in the Phillips curve, you get a very nice result. Generally, the way that the simulations go, the inflation expectations term grinds away over time, and only the

creation of a period of slack and lower inflation gradually changes expectations. If we can wind down inflation expectations discretely through this method, it produces a gain in welfare for the country that I believe we should not lightly pass by, and so I would like to do it sooner rather than later.

I'm not going to go into the details about exactly how we might do it. I've given a lot of thought to those details and the way we talk about them. As part of the process of talking about a range, I agree that a range of 1 to 2 percent in core PCE inflation would be a very good place to go. But what do we mean if we say it applies to the medium term? I could imagine events that would make the medium term longer rather than shorter. Just to give one example to get the flavor—if the country went to a value-added tax system, it would dial in price increases for quite some time as a part of moving to essentially a national sales tax. That would be taken into account, and therefore, a rigid definition would not serve us well. We would need to be able to explain why the horizon would have to be elastic under certain circumstances, and I think we could do that when we had situations for which we could provide solid analysis. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. Some people who know me quite well have been surprised at how brief some of my statements have been. So in this case I hope you'll indulge me a little. [Laughter]

MR. STERN. The good times are over? [Laughter]

MR. MISHKIN. As many of you know, I have thought quite a lot about this issue and have written quite a lot about it. I've also been thinking a lot about it recently, particularly in the context of different political environments and structures of committees in which to operate. I just finished a report on Sweden. Sweden is not the same as the United States, and the Riksbank is not the same

as the Federal Reserve, so that will reflect some of my thinking that may be a little bit different from what you have seen before.

Let me go down the decision tree, which I thought was excellent. The Committee and the staff did a superb job in framing it in a way I find very useful, so I am going to proceed exactly along the lines that they suggest. The first question is, Is an explicit numerical specification of price stability helpful? You are not going to be surprised at my answer: It's a very strong "yes." I could go on and on about this because I have written so much about it, but I'll try to be very brief on these issues. The key to successful monetary policy is having a strong nominal anchor. The kind of success that we've seen in central banks throughout the world, which would not have been predicted ten or fifteen years ago, is really remarkable, and it is because having a strong nominal anchor allows the markets to do a lot of the work for you. But also what's very important to emphasize is that you don't have to do it with a long-run numerical inflation goal—the Federal Reserve has been very successful in doing it with an individual. So I don't see that this has been a problem in recent years. I have to tell you that, maybe because I am here, I feel we are very lucky to have had the Chairmen we have had. It could have come out quite differently. Having an explicit numerical definition of price stability, a long-run goal for inflation, means that the nominal anchor is less dependent upon who the Chairman is, and I think that's actually something that is very good. It's true in the past that we have not had a problem with that, with Volcker, Greenspan, and now Chairman Bernanke.

MR. POOLE. You did before that though.

MR. MISHKIN. But we did have a problem before that, and that is exactly my point. In fact, not only might you not get the right person in the future—and that could have happened this time around, but we were lucky in that regard—but even when you have the right person, the

transition to a new Chairman has been very complicated. In particular, people might not remember this, but when Greenspan came in, there was an inflation scare in the bond markets. Long bond rates went up about 200 basis points, and the bond market tanked. I think that there was also some confusion in the markets when our current Chairman took this office about whether he was a hawk or a dove on controlling inflation. Luckily, I think that confusion has dissipated, but I think it actually made your life, Ben, a little more complicated than you would have chosen it to be. So the way I think about this is that I would like the transition to a new Chairman to be very boring, and having an explicit numerical inflation goal for the long run would help in that regard.

Clearly, there are also the standard advantages that having an explicit long-run numerical inflation goal would clarify communication with the public, the markets, and the politicians. It increases transparency and accountability. What is not discussed as much—but I think Bill Poole hit on it—is that it could clarify and make more coherent discussions inside the FOMC. I would really like to know, when somebody is advocating a certain setting of the federal funds rate, what his or her inflation goal is. Jeff Lacker has dissented in this particular meeting. I have an idea why you did because I think you have been clear on what your goal is. But if I were confused about that, I would have a harder time understanding why you're taking the position that you're taking. We have seen evidence in looking at how central banks operate that having an explicit goal has actually improved the nature of the deliberations in these committees.

Another thing that is very important is that having an explicit numerical goal would allow us to think about the way of doing monetary policy, which is becoming better understood in the academic literature on optimal policy. The way we think about doing optimal policy is looking at what is an appropriate inflation path. In particular, having a long-run goal that you know you're heading to and then talking about the path to that goal is exactly the right way to think about policy.



Let me tell you where I would like to head ultimately and then where I think the Committee should head in the short run. There's a slight difference because of some considerations I'm going to bring up. I'd like to see in the long run exactly what Bill Poole and Jeff Lacker mentioned, which is the FOMC's agreeing on an explicit long-run numerical inflation goal and doing it in terms of saying that we are defining what we mean by price stability. So I am in full agreement with you that we should ultimately head there. Then the discussion of monetary policy, both inside and outside, should focus on what the appropriate path is to get there and how long it should take. This approach is consistent with what we have learned in terms of modern monetary policy analysis. It is the way we have learned to think about this and, by the way, is consistent with the kind of policies for the most part that have been pursued by the Federal Reserve over the past ten years. A key part of the success of the Federal Reserve's operations is that, in practice, we have actually been operating in that way.

When you have such an approach, there are four basic principles regarding the way you think about changing the path that you think is appropriate in terms of achieving the long-run goal. First of all, we ask how far away we are currently from the long-run goal—so where we are really matters. Second, the nature of the shocks, whether they're transitory or permanent, is clearly important. Third, it is very important to be aware of how big the projected output gaps are because we should care about output fluctuations, something I will turn to in a second. Finally, we also want to be very concerned about financial stability issues because, if something is occurring on the financial stability front, we have to be able to deal with it. This kind of approach would allow us to have a concern about business-cycle fluctuations, which I think is key for a central bank. It would also allow us to change policy in response to financial instability concerns. It should allow us to deal with the LTCM type of situation, in which there was a potential small probability of very

disastrous things happening. In fact, it should be consistent with what Greenspan called the risk-management approach. So I think it is very important to understand that we're not talking about going to a rigid form of inflation targeting if we pursue this goal.

Now let me turn to the second issue on the decision tree, which is how we express an explicit nominal definition of price stability. I want to discuss some subtleties that really do concern me right now, which means that I'm going to shift slightly from where I want to get in the long run to where I think we should head in the intermediate term. Four critical considerations worry me.

The first is the political process. It is very important that we do not get too far ahead of the Congress on this. It is extremely important that we express a further definition of what we mean by price stability in a way that is absolutely consistent with the Federal Reserve Act and with the law and with the dual mandate. This consideration became very clear to me in looking at what happened during the testimony that the Chairman gave when he took his position. It was clearly a central issue in the testimony that I gave. It's very clear that this process is part of the American system and that it differs from many other countries. So that's consideration one.

Consideration two is that it's extremely important that we not be considered to be what Mervyn King artfully has called "inflation nutters." The British have better training in English than we have—they always have better phrases for things. But we need to make very clear that, in fact, we are not inflation fanatics. A key part of the success of the Federal Reserve has been based on the fact that the Federal Reserve is clearly perceived by the public, the politicians, and the markets as having a weight on output fluctuations in our decisions. What is also an important part of our success is that, in contrast to many other central banks, we have been willing to express our concerns about output fluctuations and the business cycle. So in my past writings, I have talked about the dirty little secret of central banking, which is that most central banks are not willing to

admit that they care about output fluctuations. I think this is actually a serious problem for them. Luckily, we don't have that problem, but if we move toward an explicit nominal long-run inflation goal, we need to be clear that we differ in that regard from other central banks. The issue here is that this is a primary reason that we've had the support of the public and the politicians. We certainly don't want to lose that. That's the second consideration.

The third consideration is that we differ from other countries in a major way, and when I look at the Riksbank versus the Federal Reserve, I see how different we are. We have nineteen participants making decisions about monetary policy, and that's extremely unusual. The only other comparable situation is the European system of central banks. Our situation is different not only because there are nineteen people but also because the participants reside in different locations. Now there are six but there will be seven of us existing in house, and there are twelve of you who factor in different locations and have a very different role. You are CEOs of an organization, and you have to communicate differently with the public than the Governors do. I really understand this because I've been on both sides, having been at a Reserve Bank and also here. That situation actually makes things very, very different.

The fourth consideration is that the Federal Reserve has been extremely successful. That gives people confidence in us and tells us that the more evolutionary we can be the better off we are. This consideration is important in two senses. One is that we want to say that we have done a good job in the past, and we are going to continue to do a good job in the future. Thus we build on the credibility that we've established over the past fifteen years or so. The second sense is political: We really want to promote political support, and looking as though we're doing something that is departing from where we were is not a good way to move forward.

Now that I have given you basic principles, let me put forth a proposal—not one to be voted on today but where I would like to see us head. Although in the long run I would like the FOMC to be able to sit down and agree on what our long-run inflation goals should be in terms of a specific number, I would argue that the four considerations I brought up suggest that we need to go a bit more slowly to that path. So here is what I would suggest. As part of our reporting procedures that we do for our Monetary Policy Report twice a year, we produce forecasts. In a similar vein, I think it would be very effective for all nineteen participants, when they are giving forecasts, to say what their definitions of price stability are and, in fact, provide that number. But I would recommend that this be done only once a year, not twice a year.

What are the advantages of doing this? One advantage is that I think we are fairly close or will become fairly close to having agreement on it. I would argue that the numbers will not be that different among us, and providing our numbers will make it easier for us to come to consensus in the future. So it is an intermediate step to get us there in the long run. Another advantage has to do with the fact that we have nineteen participants. I think it's very important that all participants are heard from and that we don't encroach on their particular views until we can actually build a consensus. So it really fits in with the issue that there are nineteen people in different locations with different jobs to do. Also, it's evolutionary; it really is not a radical departure. It's very much in the spirit of saying that we have a dual mandate. We've actually had individuals talking about comfort zones and so forth. We're just formalizing the process, and we're doing it in a way that is a step forward in transparency, so it really moves us very much in the direction we have been going. The bottom line here is that it gets us close to having an agreement. I think that is not too far away.

I do want to mention the once-a-year issue, which would come up if the FOMC actually votes on this. I think people worry about that very much because—and I agree strongly with

President Poole and President Lacker—we do not want to have the number change very much over time. (We could also talk about some tricky issues that are created by bad inflation expectations dynamics, but not now because they are more complicated.) In practice, we have actually seen something that gives us a lot of information about this issue because one of the concerns that people had when inflation targeting started was that it would be decided by governments. The problem with governments is that we know what politicians are like—they have to get elected, and they think short term; this is one reason that we like to insulate the central bank from the political process. There was then a concern that, if the government provides a number, it will do so opportunistically. We have not found that to happen, and the reason it has not happened is that providing a number is so transparent. When you actually have to give a number, you have to have a darned good reason for changing it. In fact, I think it would be very unlikely that we would find this Committee, even if we did this on an annual basis, wanting to change it. Transparency really has huge benefits. It's remarkable that, when there have been such changes, they have clearly been for technical reasons and have been in the right direction. In one case, the Bank of England changed the number because of a change in the calculation of their price index. It was done in the case of the Reserve Bank of New Zealand, with some resistance from the Reserve Bank, but they agreed that the range they went to—eventually to 1 to 3 from zero to 2—was a better number for them. Thus, I think that concern is really not going to be a problem even if we do this once a year.

I have an aside that I wasn't going to mention, but I think it's important to mention. It has to do with the issue of potential GDP and potential employment or a discussion of the NAIRU, and it relates a bit to President Moskow's suggestion, which I do not think is the right way to go. If we provide information about our explicit numerical inflation goal, it's very important to explain why doing so should not drive us to provide a similar definition of potential employment, potential

output, or the NAIRU for several reasons. The first is that it's extremely hard to know what the correct values are for those numbers, and they're extremely hard to estimate in real time, as we know. I don't even know what they are conceptually. This is a big issue in the academic literature. We have a good example of this issue right now, which is that the Greenbook has a very different view on this from what we find in the private markets—you see much slower growth of potential GDP than the markets do. Any suggestion that we have something like an employment goal would be very, very damaging to us. We also know that, when the Federal Reserve has acted this way, which they did in the '70s, it led to disastrous outcomes; Burns focused too much on output gaps, and it got the Fed into a lot of trouble. This finding comes from work done by your staff—in particular, Athanasios Orphanides.

In contrast, it is important to clarify that the reason for the big difference between defining price stability and defining employment goals is that we know from a welfare viewpoint it doesn't matter much whether we are off by 50 or even 100 basis points. I think this is the point that Bill made. He likes zero, taking into account measurement error, but if we said it was 100 basis points more than that, I don't think it would be that big a deal. We know that what is really important is to have a number to pin down inflation expectations, and not the specific number. That is absolutely not true of an employment goal. So it is very important to get that across, and it is the reason I reacted to President Plosser's comments about this issue of talking about potential, although I think that he agrees with me.

It is also one reason that I have a concern with the proposal that President Moskow has made. First of all, I don't think it is explicit enough. But I also have the problem that, if you talk about a five-year inflation forecast as a goal, people start to interpret that as a goal, and if you talk about a five-year GDP forecast, they'll also interpret that as a goal. I think it leads exactly to a lack

of clarity that will get us into trouble. So we need to be much clearer on this. If you ask me my five-year inflation forecast, that might not be the same thing as my view of the appropriate level of price stability because I have to think about what everybody else's decisions are going to be, who may be the next Chairman, or whatever.

Another issue, which is not the main subject today, is important to discuss because it may affect what the staff has to do. I have another proposal, which is completely independent of our decision to go toward an explicit inflation goal; it is that markets would tremendously benefit from more information about our forecasts, which are now twice a year, and to have that information four times a year. By the way, this proposal came out very strongly in the Meyer survey, which I'm sure you're all familiar with. They were quite in favor of it. Again, this could be done in an evolutionary fashion. We have a reporting procedure on monetary policy, which we are mandated to carry out twice a year. By saying that we're willing to do it four times a year, we are actually saying that, in the spirit of cooperating with the Congress, we are trying to be even more helpful. So I think it would fit in very naturally. What it would require, of course, is a little more work on the part of all of us because we'd have to do it four times a year rather than twice a year. But I'm willing to do that, and I think other people would be willing to do it as well.

Another key issue is that we need to greatly improve the quality of the written documents that go with this process. The current Monetary Policy Report is really terrible. It's dull; it's sex made boring. I don't want to criticize too much, but it is. [Laughter]

VICE CHAIRMAN GEITHNER. Tell us what you really think. [Laughter]

MR. MISHKIN. If it were a textbook, and I can tell you I know a lot about this, you wouldn't sell one copy. [Laughter] So it's a problem. We see this in practice in that the markets pay very little attention to the Monetary Policy Report. A feature of inflation-targeting regimes is

that they produce something called inflation reports. (By the way, I would never want to call it that in the United States; I would want to stick with Monetary Policy Report—it is a good name, and it fits into this evolutionary view.) They have improved the quality of these documents so that they receive a lot of attention. Those reports have become extremely important vehicles for getting the central bank's views across to the public and for helping the public understand what the central banks are doing; they actually also provide support for the central bank to pursue optimal policy. So improving these documents would have tremendous benefits, and I think it could be done, and I actually think the staff would probably enjoy doing them—well, maybe not. [Laughter] You'd be working harder, but that's why you get paid the big bucks. I think you'd actually enjoy doing this. In the inflation reports, they've moved to using the best textbook writing techniques—nice colors, boxes. Ben and I have been involved in this process. It's the reason that I can afford my spouse. It's a change in the nature of the way this is done, but I think it's very doable and will have a lot of benefits.

The last box in the decision tree is technical issues. That's not what we're here to discuss today. There are a lot of them. How should we report the participants' forecasts, if we go that route? What price index should we use? We would have to agree at least on what price index and whether it is a core or a headline measure before providing our views about what price stability means. Would it be a point or a range? What should be the form of the Monetary Policy Report document? Also, what does economic analysis tell us about the optimal level of long-run inflation rates so that we can actually think about the sense of it? Even though I've written a lot about this, I would like to think about all of it from scratch, and I would encourage the Committee to do that as well. In that regard, I would like to have the staff do even more work. The staff would need to provide us with a set of documents to get us to rethink these issues. There are a lot of technical



issues. The documents that you provided for the January 2005 meeting were excellent. But I would basically have a complete relook because I think there are some changes that we should be aware of, and then we can decide on what index. Some of us may change our views on exactly what number we think is the right number for the long-run inflation goal.

If we go this route, we might try a dry run on some of these things because of what Governor Kohn mentioned—once you go this route, it's not easy to go back; so you had better get it right. We might want to try dry runs of what procedure we would use to provide information. If we have a Monetary Policy Report document, we might try dry runs that we would actually discuss in this Committee. I think by doing that we would be more likely to get it right. Anyway, I am sorry to have gone on so long. I have now made up for the fact that I have been quieter other times, and I'll try to be quiet in the future if I can. Thank you very much.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. It probably comes as no surprise to most of you that I share a lot of the views expressed by Jeff, Bill, and Rick, and so I'll try to reinforce some and maybe fine-tune a couple about which I might have some additional thoughts. I do applaud the changes that the FOMC has made—over the past decade, in particular. It has enhanced its credibility. It has improved its communication and its transparency about the policymaking process, and I think that has been a great step forward. In principle, I view the announcement of a long-term numerical definition of price stability or long-term inflation target, however you want to think about it, as another important step in that direction, and in that sense, the announcement is going to be evolutionary rather than revolutionary. I also believe that it will fundamentally improve the policymaking process without unduly restricting our flexibility to respond to crises.

I think it is often important to remind the public and others that we—the Federal Reserve, the central bank—have the unique responsibility to maintain price stability. No other agency of the government is charged with maintaining price stability, and nobody else can do it for us. So in some sense, when you think about mandates and what our responsibilities are, we are the only vehicle for achieving that.

Specifying our long-term price stability objective numerically would help coordinate expectations by reducing the public's uncertainty about our goal. Long-run expectations would become less responsive to short-term inflation, therefore probably less persistent. This should enhance monetary policy flexibility in many ways. Thus, rather than being unduly constraining, it could add to our flexibility. But that's not to say that a numerical definition would not influence our policymaking; indeed, there would be little point in specifying a target if we thought that it wouldn't. The numerical goal would be a long-run anchor—the nominal anchor to our monetary policy. It would help coordinate our own discussions of appropriate policy and serve as the guidepost for our policy deliberations.

At times a policymaker would like to deviate from the commitment to long-term price stability, the so-called time consistency problem. A precise definition of what we mean by price stability, however, would make it harder to succumb to the temptation to deviate and thereby would improve policy outcomes. What we know in the context of most policies is that welfare under forms of full commitment generally exceeds welfare under forms of discretion. Now, that does not mean that there will not be exceptional unforeseen events or events with such low probabilities of occurring that reactions to them would not have been pre-specified but would require deviations from policy as usual. But these special circumstances are easily recognized. In such instances, such as 9/11 and other crises, the FOMC will be able to react appropriately.

We are fortunate, as Rick pointed out, that a number of other central banks in the developed world have set numerical inflation objectives and inflation targets. Numerical specification has been viewed quite favorably by those banks, and it seems to produce a moderate improvement in monetary policy. There is evidence that inflation expectations have become better anchored in these countries and that inflation outcomes have improved without any negative consequences for output growth.

It can be reasonably argued that the FOMC has implicitly targeted inflation over the past ten years. Twelve-month averages of core CPI inflation have remained inside a band of 1 to 3 percent. I believe, given the shocks that have hit the economy over this period, that has not been just good luck. Rather, it has been good policy. Thus, an explicit setting of a numerical objective would be evolutionary and not revolutionary for the Fed.

Now, I have not come to firm conclusions about the precise formulation of the price stability objective. We'll need to consider—as has been alluded to—which index, what period over which to define the goal, and whether we should choose a range or a point for the definition. The choices, to me, are interrelated. For example, a long horizon would mean a tighter range and perhaps even a point. A long horizon makes the choice between headline and core inflation less important. Any proposal will have its pros and cons. For example, specifying a range may be preferred if it communicates explicit upper and lower bounds, presumably above or below which we would say we are definitely away from price stability. Of course, because of inflation dynamics, to maintain inflation in that range, policymakers would have to take action before inflation moved above or below those bounds. On the other hand, a range might induce some complacency on the part of policymakers so that they would not feel any urgency to take action until inflation moved outside the range, at which point it might be too late or at least more costly to restore price stability and

reestablish our credibility. If so, a point estimate actually may be best because it would force the policy to be more explicit about why or why not any deviation should be tolerated and for how long. As I said, I've not really come to a firm conclusion about a particular formulation in that regard. Presumably, deciding on a definition of price stability would entail estimating measurement bias in particular indexes. Robert Gordon in recent work estimated that the bias in the headline CPI is about 0.8 percent per year. There are likely different estimates of the bias. Presumably having ranges will help us determine what those definitions might be. If we decided and agreed upon a bias, let's say it was 0.8, should that be our target? Yes, if price stability is our goal. However, in this regard, I agree with Bill, Jeff, and Rick that having a unique number may, in fact, be more important than what that number is, so long as it is within a fairly narrow range.

I think that this problem is a little more complex because we also have to consider the view of models in which there is actual optimal inflation. Many models of optimal monetary policy suggest, depending on the exact formulation of the model, that the optimal rate of inflation falls in a range of slightly negative to slightly positive. Thus, price stability may be desirable, but it may not be optimal in some circumstances.

Finally, monetary policy is a Committee decision. We may differ on our forecasts, our models, and our understanding of the channels through which monetary policy affects the economy, but it seems to me that the Committee must agree on its inflation objective. I don't see, as has been discussed, how we can formulate coherent policy if we disagree on the numerical long-run goal we are trying to achieve. In helping communication and the public's understanding of policy, individual definitions would create much too much confusion. This problem is evident today. For example, there seems to be a disconnect between the market's view of long-run inflation, which according to surveys and financial markets seems to remain around 2½ percent, and the statements

made by many of us on this Committee who seem to be comfortable with 1 to 2 percent. Do the markets not believe that we are seriously committed to that goal? Are we really committed to the goal of 2 percent or below? By publicly committing to a specific target, we might, I hope, obtain greater congruence of our goals and the market's expectations. Of course, we have to remember that we will not succeed at all unless our actions are consistent with our stated objective.

Let me make two really quick points about communications. First, as I said earlier, sometimes when I've read past FOMC statements I've said, "Well, why don't you just say what you mean?" I agree with Rick: I don't really like "potential output" either. I think it's important that we strive toward achieving a communication strategy in which we are not trying either to confuse the market or to send signals but are basically stating what our forecasts are, what our policy objectives are, and how we propose to get to them. Second, I'd like to reinforce the idea—and Rick spent a good deal of time talking about this so I won't elaborate on it—of a document like an inflation report—call it a monetary policy report. Part of our communication strategy would be greatly enhanced by our ability to communicate on a more regular basis what our views about the economy are and where we think it is going. As a way of communicating, such a report would be very valuable. It would be tricky because it needs to be a report of this Committee and not necessarily of the staff. How we mesh what the staff does with what the Committee thinks can be a very tricky process. So I recognize that getting to that report entails some discussion about how to proceed, what constitutes the report, and how we communicate the Committee's views independently or how we aggregate them. Thus, I appreciate Rick's argument that maybe we could have some dry runs in thinking about how we aggregate our views. What variables we need to put in the report, which are the critical ones, and what policy assumptions underlie some of those forecasts are all very subtle and complex issues.

I taught in a business school for most of my career—thirty years of teaching business students. One thing I said to students was that the tough part of management often wasn't figuring out where you wanted to go; the tough part often was figuring out how you get there from where you are. Indeed, in running an organization, in many cases that is where you run into most of your problems and where you step into the biggest potholes. Therefore, I'm very sensitive that, if we agree that we want to get to some goal, the trick is figuring out how we get there from where we are. That is critical.

The last thing I'd like to comment on relates to the so-called dual objective and Rick's comment about the importance of the central bank's concern for output and employment, the "dirty little secret" as you referred to it—that we don't have to worry about it because the public knows that we are concerned about it. But I think we have to be very careful in our communications because I worry sometimes that the public's view of monetary policy is often that we can do anything, and at the slightest deviation or problem, we sometimes step into the hole of leading them to believe that we can either fine-tune or achieve objectives that we really can't achieve. So in the context of this discussion, we need to try to communicate to the public that, although we may have a dual mandate in some respects, our ability to achieve certain objectives is very, very limited. We've come dangerously close in this period to going from a position in which monetary policy was never considered to matter for anything to one in which it's all that matters. Our communications can play a role in which we are a bit more humble and admit what we can do and what we cannot do. We should be very careful not to lead the public along a path that suggests we can actually accomplish things that most of us around the table don't believe we really can. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Minehan.

MS. MINEHAN. Well, it will probably come as no surprise to anybody around this table that I don't agree with some of the things that have been said, though I have a great deal of respect for the opinions that have been expressed. I want to go through the questions in a somewhat different order: first of all, whether or not explicit numerical specification of price stability is helpful; second, whether I think it would affect policy setting; and then third, if we're going to do it, some beginning thoughts—and they are only beginning thoughts—on how we would do it.

Is an explicit numerical specification of price stability helpful? My answer to the question hasn't changed much since we last talked about this in February 2005. I don't think it is. Based on the evidence then and the updates since, I don't believe an explicit numerical specification of price stability would have sufficient benefits to U.S. policymaking to outweigh the potential costs involved in either actually taking our eyes off the other goal of policy or being seen as likely to do so. There is no doubt that such a specification has been useful in countries with a track record of very high inflation or no central bank credibility. I think it also was useful in the formation of the ECB, since there was a new central bank with no track record. In the cases of both the Bank of England and the Bank of Japan, it was part and parcel of their gaining independence, which was important in a number of other ways. So I don't think the situation in other countries necessarily applies to the United States, and I don't think we have a good body of evidence that they've done with inflation targets, however they've been set, any better than we've done over the past whatever relevant time period it is.

It is asserted that an inflation target of some sort enhances the effectiveness of monetary policy by helping to generate market expectations and actions that are consistent with the goals of the central bank. But it's not clear to me that our current process doesn't do that about as well as it can be done while leaving some room for the flexibility that I believe is vital to the policy process.

Now if we adopted, and we probably are likely to adopt, some form of price stability specification, what does that do to policy setting? If such a target or goal is to be credible, then markets ought to have some confidence that the Federal Reserve will react in predictable ways each time the goal is either met or missed. But we don't have just one goal. We have two goals, and how we react to inflation readings or forecasts will depend importantly on the trajectory we see for economic growth, output gaps, unemployment, however we want to phrase it. Thus, the setting of an objective for just one of our goals could result in somewhat less transparency about what our policy actions right now might actually be; even worse, having such an objective could result in actually making policy in a way that is insufficiently sensitive to growth.

Every paper we have received on this topic has stressed that aspects of setting a so-called flexible inflation goal can reduce the possible cost of confusion about our commitment to dual goals. Specifically, we could set a wide range. We could choose a long period over which to attain the target. We could choose an inflation measure less subject to volatility, particularly over the long run. We could communicate extensively about all aspects of our forecast, et cetera, et cetera. But in the end, if everything about the goal is so flexible or needs continual communication, how does it, in fact, deliver its benefits?

I really wonder what problem we're trying to solve. The communications subcommittee asked for our perspectives on the goals of communication. I believe we can improve how and what we communicate, but I don't see that the effort to communicate better by definition has to include an explicit numerical target for inflation. For the best part of twenty-five years, no matter how we have measured inflation, it has moved down. GDP has faltered only occasionally, and unemployment has really been the envy of the developed world. This was done without an explicit inflation target, and I wonder whether one would have helped much. I also wonder whether we



know enough about what the underlying inflation mechanism is within our economy to lead us to certainty about what the correct range is. Is it zero properly measured, or is some level of inflation, low and stable, actually good for the way the economy functions? I am not sure I know the answer to that question, which makes me hesitant to put a numerical range around my goal.

Finally, we do need to consider the likely interaction with the Congress as we set a target for one of our goals but not another. In my view, the Congress should be very interested in the short-run tradeoffs between that target and growth in unemployment. It might be hard, for example, to explain the virtues of a goal that's focused on a 1½ percent midpoint rather than the current inflation of 2½ percent. Over the long run, I think either one of these numbers could be consistent with solid growth. But in the short run, moving from one level to another would require some sacrifice, and I think the long-run charts in the Bluebook show that. There's no research I know of that proves a lower rate is clearly preferable, though inflation stability at any low level might be. So how is the sacrifice justified? What else might that interaction with the Congress provoke? The possibility for unintended consequences is clear.

Now, I think I'm as committed to being accountable, credible, and transparent as anybody else around this table. However, I believe that we've achieved those goals in spades and that an explicit numerical target has the potential to do some harm. The possible benefits of setting a numerical target seem to me to lie solely in the advantage to some of being able to point to a number rather than thinking of price stability as the absence of concern about prices in everyday business and consumer activity. A number conveys precision, but that precision itself could backfire by seeming to require a policy response that may not be optimal.

That probably covers the question about whether a numerical price specification is helpful and the related question 3 about whether the quantification of the long-run objective would serve as

a new influence on policy setting. I think it would serve as a new influence on policy setting. Frankly, I don't find it hard to understand where people around this table come from at present or where they have come from over the past thirteen years. I think that if you set out a numerical target, it will change the dynamic around the table, and I'm not sure in a positive direction.

Okay. I know I am in a small minority. I know most people see only good or at least nothing bad coming from an explicit specification of price stability. I know the decision over time is likely to be to pursue such a specification. If that happens, here's a general idea of how I think it should be done. First, I agree with Don and, I think, Rick as well: One ought to approach this process very carefully. Once in the public domain, an inflation goal, target, specification, whatever you want to call it, will be there and will be very difficult to take away. I believe the markets at present think we're after the lowest feasible level of inflation that we can get consistent with a reasonable level of growth. Once a number or a range is attached, market perceptions might change in unforeseeable ways. When or if we take this step, it will be very hard, if not impossible, to reverse it, so we had better be both thoughtful and careful about doing it. So I like ideas such as Rick's that there are ways we can evolve to this and we can take some dry runs or intermediate steps that give us a sense of what the longer run might be.

Second, I haven't given a lot of thought to the possibility of each member of the Committee setting his or her own goal, but it is consistent with my understanding of the way the Committee is intended to function, with each of us bringing our own thoughts and frameworks to the table. Over time, the resulting diversity of perspective is vital to the way the Committee works. Thus there is some appeal to the direction in which Rick was going, which is, as a first step, disseminating perhaps twice a year or more frequently the range of FOMC participants' personal definitions of price stability in conjunction with their near-term forecasts. I wouldn't extend the forecast. The

difference between the two could well indicate policy concerns even without fully specifying the underlying policy path in the forecast. I don't know if that's where you were headed, Rick, but I see some value in that step as a matter of evolution. Perhaps a key reason I seem to think more about each participant's own price stability definition is that it allows for some uncertainty about how the policy discussion will come out. Maybe unlike others, I see some policy uncertainty as a good thing. Most of the time we cannot forecast exactly what the Committee will find necessary to do, and I think we should avoid giving the appearance that policy moves are always known months in advance when they aren't. Making it clear that nineteen different perspectives and definitions are involved could, I think, contribute to that.

Finally, regardless of whether a numerical specification of price stability is set for the Committee as a whole or reflects a range of our individual preferences, the target specification needs to be a range rather than a single number. I think of it as an umbrella rather than a target. We should use a measure based on either the headline or the core CPI on the grounds that most people know what that is. It is part of the life that they live day by day, and so it resonates in our communication. We should set a medium-run to long-run target of five years or so over which the specification would be met if the relevant range were exceeded. I think that gives us enough flexibility to deal with crises of one sort or another. We should do whatever we can to make sure that we, the central bank, and not the Congress, set the target if we're going to have a target. That's as far as I can go.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. In August, this Committee discussed the goals for our policy communications and generally agreed that one goal is to improve the effectiveness of monetary policy and the performance of the economy by helping agents generate

well-informed expectations consistent with the goals and strategy of the central bank. The other goal is to enhance the accountability, credibility, and democratic legitimacy of an independent central bank.

I think that an explicit numerical specification of price stability can help us achieve these goals. I'm in favor of establishing an explicit numerical objective by a vote of the Committee, but I recognize that we have many issues to resolve before we would feel ready to implement such a practice. The economic research in support of explicit numerical objectives is encouraging but nowhere near conclusive. The same can be said about the experience of other central banks. So, unfortunately, there is no single off-the-shelf solution for us. Our challenge is to craft our own framework—one that's achievable, understandable, and believable. Fortunately, there are steps that we can take to move us in that direction. A significant internal benefit to adopting an explicit numerical objective is that it would help communication within the Committee. At a minimum, knowing each other's inflation objectives would help us understand when we disagree, whether the disagreement concerns our objectives or the means of achieving those objectives. Externally, greater specificity could help us anchor the public's inflation expectations. In our current environment, with inflation low and credibility high, I don't see the external benefits as being especially large. However, history does have a way of repeating itself. If we had to face conditions like those of the 1930s or the 1970s again, having an established practice of achieving explicit inflation objectives could prove helpful, and it could be a potent insurance policy. So the benefits of having an explicit numerical objective will be significantly greater during those periods of extreme inflationary or deflationary pressures than they are today.

Of course, as others have indicated, an explicit numerical objective has potential costs. We might want to deviate from our objective for good reason but feel constrained from doing so.

Here I'm encouraged by the experiences of other foreign central banks, which suggest that flexibility is available. There is also the potential loss of credibility from not achieving the objective when we should be achieving it, but that is a cost that I think we should dedicate ourselves not to incur. Our challenge is to construct a framework in which we have the flexibility to make small deviations from a numerical objective—but not large and persistent ones. Two other potential costs matter to me. First, I want to pursue this option within the mandate that we have from the Congress today. I'm not sure that inviting new legislation would prove, on balance, to be constructive. Second, as we explore our options for jointly establishing an explicit numerical objective, I would like to see the independent contributions of individual Committee members preserved.

Turning to Vincent's question about how we should choose the inflation objective, I prefer, as I said earlier, ultimately to arrive at the objective by a Committee vote rather than by establishing individual objectives. I think the public would be least confused by a simple statement from the Committee that says its operating definition of "price stability" is X percent, with a range, and that specifies the particular index we're using and the time horizon by which we're trying to achieve the objective. In other words, this approach would be the most understandable. In choosing the X percent with the range and the time horizon, we'll have to be sure that we achieve the tests of achievability and believability. We might benefit from having a period during which the public can get more comfortable with this option. An expression that I like is "make haste slowly." One step for getting us started would be to survey the Committee members about their working definitions of "price stability" and to publish the distribution along with our semiannual economic projections. Obviously, a potential pitfall of this practice, as others have mentioned, is that eventually people are going to know that we're doing this and

they're going to want to know our specific individual objectives. So as we move forward with that practice, we're going to have to be aware of that.

Turning to Vincent's third question—"Will quantification serve as a new influence in setting policy?"—I think that we can expect that having an explicit numerical objective could change policy setting in ways that we can't foresee. But I can also see some intentional changes to the policy-setting process. First and foremost, being more explicit about our inflation objective will shift the time horizon of our analysis and our discussions at our meetings into the future a couple of years, which I think is a good thing. A shift in the focus on the medium term would lead us to spend less time talking about where we are relative to the short-term Greenbook baseline and to spend more time talking about whether we agree or disagree about issues like productivity trends, the transmission mechanism, the cost of inflation, inflation measurement, and so on. These are now regarded as special topics, but I think they would become more normal fare under a new regime.

I like Governor Mishkin's and President Plosser's suggestion to improve the Monetary Policy Report to the Congress and to the public. Once we start to discuss these longer-term trends, they could be included in the report, and their inclusion would make the report more beneficial. The positions I've taken on these specific questions are positions that I had before I walked into this room, but I recognize that my views are evolving as I'm listening to some of my colleagues' comments on these issues. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I'll start at the top of the sheet but then jump around. So the answer to the first question is "yes"—I do think that an explicit numerical specification of price stability would be helpful and that the FOMC should move toward such a

specification. I always thought this step was a close call in terms of its costs and benefits. There have been a couple of developments since January '05, when we last discussed the topic, that have led me to change my position to favor this step. First, we've been through two more episodes—in the spring of '05 and the spring of '06—when a surge in actual inflation raised questions in financial markets about our intentions and expectations. In both cases, higher inflation expectations did not persist. But making our long-term intentions clearer should reduce the risk that temporarily heightened inflation pressures result in increases in expectations that become more permanent and more costly to reverse. A couple of studies in the past two years have tended to support the hypothesis that a numerical specification might help tie down expectations at least a little within the financial markets. Second, I think a lack of clarity on this question has increasingly muddied discussions in this Committee and communication with the public. Within the Committee, it has sometimes been difficult to discern whether differing viewpoints reflect diverse perceptions of the course of inflation and economic growth or of the desirable end point or path for inflation. The public does not know whether the comfort zones enunciated by various Committee members reflect the views of the Committee or only those of the individuals. Coming to an agreement on an end point and on the role that end point should play in policy and announcing that agreement should help our discussions and enhance the public's understanding of our intentions.

Having said that, I think we need to recognize that any explicit inflation specification is likely to exert some pull on policy. It will not simply institutionalize the Volcker or Greenspan policy regimes, as is sometimes said. It cannot help but to increase the Committee's focus on particular numerical outcomes and projections for inflation. That's good to the extent that it reduces the odds on a repeat of the cumulative errors of the 1970s, but it also may make it more

difficult for the Committee to take actions that might be perceived at the time as inconsistent with achieving price stability in the next few years but that were still in the public interest—say, by countering financial distress, as in 1998, or by moving very, very aggressively against economic weakness, as in 2001, when core inflation was actually rising. A risk-management approach to policy may well call for aiming away from the price stability objective from time to time.

I continue to believe that monetary policy over the past twenty-five years has been exemplary. We should be very cautious in tinkering with its design. Whatever we do must be clearly consistent with the dual mandate and be perceived as such. This is important for democratic legitimacy. The Federal Reserve Act includes maximum employment equally with price stability. I recognize and have often used the principle that price stability enhances maximum employment. But I also note that proposals introduced in the Congress over the past two decades to make price stability our primary objective have not had support, and they've gotten nowhere. I'm encouraged by the fact that Chairman Bernanke in his hearings didn't meet too much opposition [laughter] but I think we need to recognize that there have been attempts to change our mandate and there has been no congressional support for those attempts. I think the last attempt was about ten years ago. The dual mandate is also good economics. Fluctuations around potential impede planning and long-term saving and investment decisions, just as do fluctuations around price stability. We need to take explicit account of these costs as we pursue our price stability objective, and this implies that we should tolerate deviations from price stability on occasion and that the time path to price stability should depend on the circumstances, including the likely costs in lost output along with the deviations from price stability. Support for the Federal Reserve in the population and among its elected representatives has never been



higher, certainly never higher in my thirty-seven years at this institution. That support flows from the results of the past twenty-five years and from confidence that we know what we're doing and will behave sensibly. This was the second type of credibility that Chairman Bernanke talked about at the last meeting.

We should not depend on any announcement to have a substantial immediate effect on inflation expectations, where they count most for economic performance. Professional economic forecasters would have a number to coordinate on, and they probably will. It may help tie down expectations in financial markets, but even in financial markets, the effects are likely to be small. Long-run inflation expectations are already well anchored in the United States. Spreads over indexed debt move around quite a bit, even in inflation-targeting countries. For example, as we saw in the briefing on Monday, inflation compensation has fallen since July the same amount in Canada that it has in the United States. As the staff memo on price dynamics noted, the data do not support an inference that such an announcement per se would affect wage-setting and price-setting behavior. Such influences would come because our behavior and the economic results would change.

These caveats and concerns lead me to favor a numerical definition of price stability without an explicit time dimension rather than an inflation target that we would expect to achieve in a defined time frame. I have in mind something along the lines of Chairman Bernanke's suggestion in St. Louis three years ago—the long-run average inflation rate we will be seeking in order to meet the price stability mandate in our act. We would not expect to achieve this objective year by year or even necessarily on a two-year-ahead projection. That would depend on the circumstances. My expectation, or maybe it's a hope, would be that the benefits of such a formulation would exceed its costs—that without greatly impeding the type of flexible

policymaking that has so benefited the economic performance since 1980, it would help a little to tie down expectations, aid the public in making its plans, clarify internal and external communication, and make it more difficult for future FOMCs, when all of us have retired, to allow inflation to drift higher. I don't have well-defined views on the exact specification of this definition—the index, its level, point or range, whether it should be expressed in terms of total or core—but these specifications will be critical in judging the eventual likely balance of costs and benefits.

If we go down this route, we'll have a lot of work to do. Besides the details of the specification, it's vitally important that the Committee think through very carefully the role that any definition of price stability would play in policy formulation and that we convey our expectations to the public. It would have implications for all our modes of communication as well as for the inputs to policymaking and would call for considerable communication to the Congress and the public to prepare the way. Understanding what we're doing and explaining it to the public in turn requires that the Committee come to a decision on the definition and the way it will be treated in policymaking. So I favor the "jointly" arm of Vincent's chart. I can see some of the suggestions of aggregating the views of individual policymakers as a possible way station, but I'm concerned that such aggregation will raise as many questions as it answers. If we go to a numerical definition of price stability, we should be prepared to explain and justify it fully, and that requires the Committee to consider those implications explicitly. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. First Vice President Barron.

MR. BARRON. Thank you, Mr. Chairman. In light of the hour and the fact that many of my more learned colleagues have yet to speak, I'll try to be brief. My comments come from one

who has been with the Federal Reserve System for some thirty-nine years, has been seated on the sidelines of this Committee for fifteen years, and has observed the evolution of communications and the critical importance of transparency.

I'd like to make two observations. First, if the goal of adopting an explicit target is to institutionalize credibility, then this should not be a big concern now. The Committee has credibility, and the recent market evidence on low market volatility and contained inflation expectations is clearly consistent with the conclusion—the recent *Wall Street Journal* article notwithstanding—that this Committee has credibility. Over the long run, however, there are some looming fiscal issues—specifically, the projected growth of nondiscretionary spending—that make the conduct of monetary policy very difficult. From this perspective, an explicit target may provide additional reassurance to the market that the Committee can pursue its low-inflation objectives with some independence from the pressure to accommodate fiscal deficits. Second, as many have noted, to move to an explicit numerical target raises a number of both practical and political issues. These issues concern not only the specifics of the target, the choice of the time horizon, and the methods employed to ensure transparency and accountability but also the nature of the negotiations to ensure congressional acceptance and support. The System's mandate has been modified several times, most recently in December 2000. If, and I would emphasize "if," the Congress required or even suggested additional legislation, I believe the risks and potential costs of opening up the Federal Reserve Act might be great. For example, the Committee might also get numerical targets for employment or even specific targets for housing or other sectors that might be of special interest to individual members of the Congress. My bottom line is that, given the risks, I take some comfort in the current vagueness of the wording of the Federal

Reserve Act as it relates to monetary policy objectives and the way it has been interpreted over the past many years.

My sense is that the Committee may well be close to having the right balance with regard to communicating its objectives and ensuring credibility. Although, clearly, the Congress can change our mandate any time, I would urge caution in providing the impetus for such change until we have thought long and hard about the costs and benefits of that change. Having said all that, I find a great deal of comfort in Governor Mishkin's approach at gradualism. I would certainly be comfortable with that approach if we could avoid nailing, so to speak, a tablet to the halls of the Congress saying, "This is going to be our explicit target." I think to do so would simply lure them into a fight that I wouldn't want to take on at this time. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Mr. Chairman, in preparing for today's comments, I found it interesting and somewhat instructive to look back to similar discussions that this Committee has had in the past. This includes not just our more recent ones but an extended debate that took place in July 1996. I can confirm, therefore, that we have a deliberative process. [Laughter] Looking back over how my own views have evolved, I am as convinced now as before about the importance of an unqualified commitment to price stability as the underpinning of our monetary policy. I have long had an interest in how an inflation-targeting approach to policy might help us, and that's where I think it gets interesting because I think the devil is in the details, if you will. As the staff and I have tried to work through some of the details we would have to confront in implementing such an approach, I have become somewhat less enamored than I was about the usefulness of establishing an explicit numerical inflation objective. I am not necessarily opposed to such a

step, and if we were to go there, I'm more drawn to Governor Mishkin's approach than to others I've heard. But I do have concerns about the value of doing so, as well as how such a decision would be implemented and how it might alter the decisionmaking process and our discussions within this meeting—the so-called unintended consequences of moving along this line.

Let me address these points by framing my comments according to the questions in Vince's memo. First, is it helpful? As I understand the literature on central bank transparency and credibility, the value of establishing an explicit numerical definition of price stability comes from anchoring the public's inflation expectations and reducing the volatility of these expectations. In this regard, I have been struck by how well anchored inflation expectations have been in the current tightening cycle here in the United States. This is in contrast, I realize, to some historical contexts, but the fact of the matter is that they have remained quite anchored. How much further improvement would come from the adoption of an explicit target at this point, I question. Would it be meaningful? I'm not so sure.

Another argument is that adopting an explicit numerical objective would make it more difficult for future Committees to backslide on their commitment to price stability. I find this argument somewhat weak. Short of a change to the Federal Reserve Act, future Committees would not be bound, nor would they feel bound, to actions taken by this Committee. I can see someone pushing forward at some time, in terms of the dual mandate, an issue relative to stable output as becoming a new important element. Moreover, my reading of the literature comparing the performance of inflation-targeting and non-inflation-targeting countries suggests that there is very little measurable difference in performance to this point.

In the absence of a clear benefit of establishing an explicit numerical objective, we also need to look at its costs. One possible cost is the constraint that might be placed on short-run

policy decisions. In this regard, I wonder how an explicit numerical objective might have altered our response to the weakening economy in 2001, which Governor Kohn mentioned. Since core inflation measures tend to lag output, core inflation was still rising as we began to reduce rates. Would we have been as able to cut rates as readily if we had established an explicit numerical objective? Perhaps yes, perhaps no.

How should the objective be chosen? Turning to the question of choosing an explicit numerical objective, I see a host of procedural and logistical issues. As to procedure, I feel strongly that any decision should reflect unanimity on the part of the Committee; otherwise, the credibility of such a decision is immediately called into question. Establishing unanimity about the details of an objective could prove difficult. For example, I would not be comfortable with using the core PCE deflator exclusively in defining a measure of price stability. Theoretically, PCE is generally judged superior to the CPI because chain weighting avoids the substitution bias in the CPI. In another important dimension, however, the case for the PCE is much weaker. Perhaps most notably, the core PCE deflator is subject to regular and sometimes significant revisions. The revisions to PCE over the past six years have not been trivial; moreover, they have all been in the same direction. By underestimating inflationary pressures during this period, core PCE sent misleading signals about those pressures. Moreover, the CPI plays a much larger role in the institutional fabric of this economy. I find it interesting that so few members of the financial community produce forecasts of PCE inflation, even as they view it as the Fed's preferred measure. More important, TIPS-derived measures of inflation expectations are based on the CPI. Thus, to line up market inflation expectations with the PCE we are forced to go through the sort of exercise that is reported in the current Bluebook. I wonder how accurate or useful such a translation might be over an extended time. Consequently, if we were to go the

route of establishing an explicit numerical objective, I would advocate not tying ourselves exclusively, for example, to the PCE.

As to whether an explicit or implicit approach is preferable, I would lean toward an explicit approach of surveying members on their long-run objectives. I feel this approach would be more transparent and efficient than expanding the horizon of central tendency forecasts.

How would an objective influence policy setting? I believe there would be effects, but gauging these effects would be difficult without a more thorough and detailed understanding of how the objective would be implemented. If we decide to go in this direction, it will be important to maintain the diversity and independence of views expressed by the Committee members, both in our deliberations here and in our interactions with the public.

Finally, if we explore a form of price-targeting or inflation-targeting, we should hold off on an ultimate decision until we have a thorough understanding of the details of such a regime and their implications for the policy process within the Committee. Once again, just as reinforcement, I prefer going forward along the lines that Governor Mishkin outlined for us. Thank you.

CHAIRMAN BERNANKE. Thank you. President Stern.

MR. STERN. Thank you, Mr. Chairman. The last time we discussed an explicit numerical objective in an organized way I said something to the effect that I thought one reason to have one would be to formalize and institutionalize what I thought the Committee had largely been doing over the past ten or fifteen years. I continue to feel that way, and in that sense doing it is evolutionary along the lines that some other people have described. But evolutionary is not insignificant, and I do think this would make some significant changes, which I believe would be

helpful. We have already touched on some of the communication and accountability issues, and I certainly share the views that this would be positive with regard to those matters.

Another important related consideration is that it's a potentially effective way of addressing the issue of time inconsistency. I do think it's very important that we tie our short-run decisions to our long-run objective. I don't think there is much disagreement about our long-run objective. Stated generally, that is to achieve and maintain price stability. I'm eager to see that we put in place some framework—this is not the only framework that one can conceive—that accomplishes that objective. So I think that this would be both helpful and important and that it would be a new influence in policy setting. That's its intent.

It does raise, as others have already commented, a number of interesting intellectual issues having to do with whether to have a range or a point estimate, over what time horizon we are trying to achieve the objective, what it all means for how the Committee is going to change the federal funds rate over time, and so on and so forth. I think those questions are potentially very important. By the way, just so I can preserve some degree of freedom, let me state explicitly that I'm not persuaded at the moment that a range of 1 to 2 percent is the appropriate target for us, even though that range has been in the public domain for a while.

Finally, how should the Committee choose the inflation objective? At the end of the day, I think it should be a Committee decision. But I can see getting there in a more evolutionary manner, and I would associate myself with many of Governor Mishkin's suggestions.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I'll address the major questions posed in Vincent's memo in the order presented. First, I support the enunciation of a long-run numerical inflation objective. My views on the benefits and costs of enunciating publicly such an objective



have changed very little since we discussed this topic in January 2005. Beginning with the benefits, I believe a numerical objective would focus our internal policy deliberations and improve their coherence, particularly if the Committee does agree on a common objective. A numerical objective appropriately communicated could also improve the public's understanding of our goals and the strategies for attaining them, thereby helping to align market perceptions with those of the Committee. Solid anchoring of the public's inflation expectations could aid us in avoiding deflation in the vicinity of the zero bound on interest rates and could reduce the potential for destabilizing inflation scares following adverse supply shocks, thus enhancing the scope for monetary policy to respond to their real effects. Finally, the public enunciation of the long-run inflation objective would enhance accountability and transparency in a way that I think is appropriate. It's a desirable goal in a democracy.

Although I do perceive there to be net benefits from enunciating a numerical objective, I do not think these gains are enormous relative to the status quo. The public already has a reasonably good idea of the Committee's inflation preferences, and inflation expectations are now pretty well, if not perfectly, anchored. Moreover, the evidence, as I read it, suggests that a central bank's credibility on inflation depends more on its actual record of performance than on its utterances about its objectives. So no dramatic improvement in the sacrifice ratio seems likely.

Interestingly, a recent survey that several of you have referred to, and I'm assuming most people have seen, by our former colleague Larry Meyer finds that only a minority of the respondents favored the Committee's adoption of a numerical inflation objective. Market participants appear far more interested in improved communication concerning our assessment of the near-term outlook and prospects for monetary policy, and that suggests that as we go

forward we should place considerable emphasis, as Governor Mishkin emphasized, on enhancing our forecasts in the context of the Monetary Policy Report.

The enunciation of a numerical inflation objective could have costs as well as benefits. My main worry is the potential for de-emphasis on the other part of our mandate, namely maximum sustainable employment. Such a de-emphasis could occur in the minds of the public, and I could easily see how it could affect our own deliberations. I think the current situation provides a case in point. If the structural Phillips curve has indeed become as flat as FRB/US estimates, an optimal policy for lowering inflation to target brings it down exceptionally slowly when equal weights are placed on the inflation and the output gaps in the loss function. You can see that in the Bluebook simulations. With the public focused on a numerical inflation objective, however, it is naturally tempting to seek more rapid convergence to a target. I think we feel uncomfortable with the paths that we see in the Bluebook, and it would be easy to effectively down-weight our emphasis on the employment objective. Interestingly, almost half of the respondents to Meyer's survey believe that the enunciation of a numerical inflation objective would impair the FOMC's ability to meet its maximum employment objective. Therefore, enunciation of a numerical inflation goal, in my view, must occur in the context of a clear statement concerning our commitment to the dual objectives. In this regard, I remain attracted to our Chairman's 2003 suggestion that we state the target inflation rate as a long-run objective only and emphasize—again, to paraphrase our Chairman—that in deciding how quickly to move toward the long-run inflation objective, the FOMC will always take into account the implications for near-term economic and financial stability. Consideration of the horizon issue is mentioned in the other question section of Vincent's memo, and I, for one, take this issue to be crucial and

would be unable to support a numerical objective unless the horizon can be long enough and flexible enough to respond appropriately to employment considerations.

Now, I'd like to turn to the second major question, which deals with governance in essence. Will the inflation objective be chosen by the Committee members or by the meeting participants, and will it be chosen as a group decision or by summarizing our individual views? I think there are enormous advantages to reaching a joint Committee decision. This approach would provide the clearest focus in our policy deliberations and Committee communications, and it would probably work best in anchoring inflation expectations. It would also provide a well-defined standard against which we could be held accountable. However, I, too, recognize that it is probably wise to move in this direction cautiously. I would certainly support, as a first step, Governor Mishkin's proposal to report a consensus of responses to an annual survey concerning long-run numerical inflation objectives of the participants. This approach would be a measured stance, more measured than a Committee vote, and I think it would be less likely to be divisive within the Committee and vis-à-vis the Congress. Such a survey respects the possible diversity within the Committee, and the Congress might be less likely to object to the Committee participants' stating their individual interpretations of the monetary policy mandate than to the formal adoption of an inflation objective. Of course, choosing to use a survey now would not preclude us from voting as a Committee on a single objective later on.

We could, as an alternative, communicate the Committee's long-run inflation objective through lengthening the horizon of our inflation forecasts. Such an approach, however, has significant disadvantages in my view relative to a straightforward survey of opinions. Consider the current situation. If the extended Greenbook forecast is accurate, adding just a year or two to the forecast we prepare for the semiannual Monetary Policy Report would not work. In fact, to

convey our implicit inflation objectives, if we accept the optimal policy path in the Bluebook, we might have to add five years or more to those forecasts. Moreover, if we extend the inflation forecast, we will also need to extend forecasts, as Governor Mishkin noted, of real GDP and the unemployment rate, and some members of the public and the Congress could misinterpret these estimates as the Committee's goals for these variables; at a minimum, such estimates could lead to unproductive discussions about what the correct estimates of those key concepts are. That is an exercise I would not relish.

Finally, on the question of whether policy settings will be affected by a long-run inflation objective. In some sense, the answer has to be "yes." For example, I argued that the benefit of having an inflation objective is that it would help to anchor public expectations of policy, and if it did, it would affect bond rates and other financial variables and their responses, presumably in constructive ways, and would therefore feed back onto policy.

But the real issue is this: Will a publicly announced inflation objective affect the weights that we put on the elements of our dual mandate? Will it cause us to respond more strongly to inflation and less strongly to employment? As I said before, I am concerned that this could happen, if only inadvertently. If we go this route, I myself would make every effort to prevent such a distortion to the weights that I use in analyzing policy decisions.

CHAIRMAN BERNANKE. Thank you. Governor Bies.

MS. BIES. Thank you, Mr. Chairman. As you know, since we've started talking about this issue, I've been undecided—"open-minded" is perhaps another way to say it. Wearing my supervisor's hat, I see that we've been talking to players in the markets about how important transparency is to the effective functioning of financial markets and to financial transactions. So it's hard for me to give a rationale for why the central bank is not more transparent. Being part

of a democracy means that for us as a central bank—especially since we weren't directly elected by the citizens—transparency is very important.

However, the unintended consequences of what setting a goal would mean have always held me back. That's why I support the process that has been laid out here. We really do need to take the time to think through all the consequences and, as best we can, identify some possible unintended consequences. So the evolutionary approach—let's look at it all together before we decide—I very strongly endorse because, at the end of the day, our credibility is paramount—it is something that we have to cherish as much as we possibly can.

I also want to think a little more about the dual mandate issue as we go forward. I tend to believe that having a more explicit target and continuing to achieve low and consistent inflation will, in effect, support and encourage growth and full employment. So the issue may be one of communicating that relationship. I really feel strongly about this. I have no empirical basis but just fifteen years as a corporate CFO. One disconnect that you have as a CFO in the corporate world is that you live in a world of nominal, not real, rates of growth. You worry about growth of earnings per share, and you want to know what your top-line revenue is going to do, so you think about prices and output. Having a nominal anchor for inflation would actually support corporate decisionmaking, give people better discipline about pricing power versus riding the wave of inflation, alert them when inflation is below target, and make them understand that this could be a short-run downturn in top-line revenue growth. When I think back to the '80s, a lot of companies thought top-line growth was stupendous, and it took their eyes away from really working and operating efficiently. So I think that having a nominal anchor would actually enhance the real-world tie between our role as the central bank and corporation decision processes.

Again putting on my supervisory hat, I think that one of the critical things as we state this objective is that we clearly say how financial stability fits in. We've been talking about central banks moving more and more to inflation targeting, but they have also been focusing more and more on financial stability and the role of the central bank in financial stability. That is one of the implementation issues we need to think through. What is the framework in which we will look at financial stability, and where might it conflict with our price objectives and inflation objectives?

Regarding how we would choose an inflation objective, I am very leery of one of the proposals in the staff memo to use longer-term forecasts. I agree with Governor Mishkin that we can improve the Monetary Policy Report, but making longer forecasts is fraught with a lot of risk, and I don't really see there's much benefit to it. After all, our objective is not to be the best forecasters in the world. It's to control inflation. So I don't think it adds a whole lot of value. As President Yellen said, everybody will be asking, "What are the underlying assumptions?" It will get us sidetracked away from our overall objectives. I prefer the alternative in the staff memo that the way forward is what we did years ago when we took the rates of growth and money supply, and we just surveyed all of us. Maybe along the lines suggested a bit earlier, we just say, "Here is the range of price objectives." Just announcing a long-term forecast doesn't clearly say what the objective is. If we want to set an objective, let's set an objective and not just give a long-run forecast.

Another part of setting an objective is spending a lot of time thinking about the time frame over which we are going to achieve it. Saying that this is our long-run objective is one thing. It's very different to say how quickly we're going to return to the goal when we move away from that goal. In the discussion around the table yesterday, many of us said that inflation,

even in the forecast, is running a bit higher than our comfort zone. We know we've been above it for a couple of years, but with this forecast we'll be above our comfort zones for five years. In effect, having an objective—and knowing what each other's objectives are—would have changed the discussion we had around the table. If we really believe that we're above our comfort zone, then how can we make the decisions we're making? What is the path? That would have implications for the staff. If we really want to hit an objective, strategy, as President Plosser said, is the real issue. How do you execute? We can all set great goals, but it's execution that matters. A nominal objective would force the staff to spend a lot more resources in talking about the path of policy and the way we would respond to variations around that path. That perhaps could actually improve decisionmaking.

Finally, getting back to the transparency issue, I think an explicit objective would put good governance around us, particularly in the difficult times when we are varying from our objectives, because we would have to talk about the tradeoffs we have with our dual mandates or financial stability concerns or whatever is creating a long-run deviation from that path. So I come back to my thought that the effort to look at this is worthwhile, but I really encourage us to think about all the consequences as we go forward.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Let me frame my remarks around the relevant constituencies, trying not to avoid answering the hard questions. The prism through which I think about this is, What's the political acceptance for what we're trying to do? What's the market acceptance and what's the policy acceptance for what we are trying to do?

As I think about the three issues and weigh the costs and benefits, I find the costs of each are easy to elaborate in great detail. The benefits appear to me to be very real but hard to pin

down with confidence as to both when we would achieve those benefits and how they would accrue to the credibility of this institution. I am most in accord with President Yellen's description, which is that there may well be net benefits to going down this path but the costs are much easier to put our hands around. We're approaching this discussion through the prism of inflation targeting, which is really the elephant in the discussion. In some ways, I dare say it made our previous discussion tough because we were tiptoeing around the core inflation-targeting question. Inflation targeting has taken a life of its own in academia, in the capital markets, and in the political environment. Although inflation targeting is a proper framework for the discussion here, it is a very dangerous way in which to approach our public discussion.

Let me discuss that point in a little detail. Inflation targeting, certainly on Capitol Hill and to many market participants, suggests that some mechanical exogenous force will be an absolute constraint on the FOMC's actions. That's not the way most people here today have talked about inflation objectives, but it does taint the discussion in our relevant constituencies outside the building, and we have to be very much aware of that fact. It strikes me that, once we've figured out more or less our own path to making an institutional decision on this, we should be discussing it more broadly outside the institution as a continuation and manifestation of what the Fed has long done. Instead of using words like "inflation targeting" outside the institution, we should use words like "price stability." Talking about this as the next generation and the formalization of the comfort-zone language, which either by design or by practice has marked many of our discussions in the past year, is a much more useful way for us to make meaningful progress in Washington and in the capital markets.



You saw from Larry Meyer's survey that there was, I think, a decided tone of "Hey, we just want to know what the right answer is. Tell us what you guys are going to do next. We just want data that give us the answer because then we can put them into our Excel spreadsheets and life will be grand." [Laughter] I think that's a trap that we do not want to fall into. What we want to be doing, rather than generally trying to provide them with greater clarity than we can provide about what our decisions are going to be, is to give them better information on what we're using to make decisions.

I fear that, if we announce an inflation target per se, and provide some specificity about that announcement, we will have engendered credibility questions that we will need to answer. In the most recent cycle of our interest rate decisions, very few of us, I think, would have somehow done things differently if an inflation-targeting regime had been in place. My own sense is that we can't believe that we need to hamstring ourselves with such an exogenous force. At the other extreme, we don't want to go down this path if we say inflation targeting doesn't change our flexibility at all. So the relevant question is, what does this do to our flexibility? If the answer is that it doesn't constrain our flexibility at all, then it is really unwise because of all those costs that we've talked about. If the answer to that question is that it does constrain our flexibility significantly, then we have a huge problem in all our constituencies. So we end up having to admit, as we go down this path, that it does somewhat constrain our flexibility but saying that the FOMC is as prepared as ever to respond to real market developments with respect to employment, output, and financial crises.

So where does that put us? Again, the debate should be framed as a continuation of what we've long done. After we announce our conclusions from these discussions, at some point we would need to reject the straw man of what inflation targeting has become. If an interrogator on

Capitol Hill or in the capital markets says, “This is the goal, this is the number, and you will get inflation down to that goal within X number of years,” the response has to be “no.” That is, that’s not how we’re thinking about the next generation of transparency.

Regarding an incremental approach to getting from where we are to where we want to be, I would begin, once we’re ready to go prime time with our announcement, by avoiding the adoption of inflation targeting per se and by letting that straw man be put out there and shooting it down to suggest that’s not where we are. My next measure would be to accelerate the timing of existing information, by which I would reference the minutes, the lag in the forecast, and the generation of our central tendency. Then I’d add frequency. I think the idea of going from a semiannual to a quarterly presentation of our information, as Governor Mishkin suggested, would be next in the evolution of being more transparent to the markets about what we mean by “price stability.” Then I would consider adding robustness to the data provided—that is, what data sets that are not in the public realm and that we use for our own decisionmaking could be helpful? Finally, looking at how that information has proceeded along this path of transparency, we then ask ourselves whether we need to have a formal vote on the big question that Vincent laid out for us or whether a vote is unnecessary because we’ve already proceeded so far down the path that we’ve ended up with a rather, though not totally, explicit definition of what price stability means.

As a final comment—we’ve discussed around this table whether this decision is an individual or a collective one. In my judgment, a consensus decision is a good one. But I don’t think we should fool ourselves. Federal Reserve policy has been personalized, and no matter what we do, it will continue to be personalized in the form of the Chairman. What the markets and the Congress will be most interested in is, “Well, I hear that’s the central tendency view of

the FOMC. What's your view?" I want to make sure as we go through this process that, because we know that questions will be asked of the Chairman, we haven't constrained his flexibility. He must dutifully report perhaps what our consensus views are, but we shouldn't let there be any ambiguity about what are our views and what are his views. To the extent that there's a difference, perhaps he is obligated to describe that. But I wouldn't want this process ending up by constraining the Chairman about what he could say because at the end of the day, whether all of us like it or not, it is the Chairman's judgment, much more than any of ours, that influences our monetary policy. Thank you.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Well, I don't have any written material prepared, Mr. Chairman—just notes I've taken, in part because I confess that before this conversation I was somewhat nonplussed about this issue. That is, I'm a little perplexed about why we're talking about it now, given what many commentators have said about where we are presently. We have achieved significant credibility with the previous two Chairmen of the Committee and you and with the actions of the Committee. I have been asking my own staff in Dallas to give me the compelling reason to do this now.

I've heard four compelling arguments, or arguments that at least purport to be compelling, during this discussion. One is that it will improve the policymaking process and focus, although I think President Minehan properly expressed some skepticism as to whether it would actually change the focus, intensity, and process that we have had. The second is that it would coordinate and better anchor public expectations. Governor Mishkin, with great enthusiasm by the way, made that argument. His remarks were not only insightful, but they were also charming. [Laughter] The third is that it would plant our current legacy; I think Governor

Kohn touched on one of those sensitive nerves. The fourth is a subset of the third point: the political risk of loss of a Chairman with willpower.

I won't go into all the aspects of this that I have concerns about. But I don't want to bat away President Moskow like a mosquito here. I think he made an important point, which was summarized by President Pianalto, who drew on her ancestry with the term "festina lente," which means "make haste slowly." That's why I would like to suggest in one dimension only—rather than discuss what everybody else has already talked about: the political dimension of what we are discussing. I see an explicit numerical target as extremely risky politically unless we manage it carefully, and I would just ask all of us to bear in mind what those political risks are.

We do have a dual mandate. I agree with those who have said that we do not want to run the risk of changing our current charge from the Congress. As I listened to Governor Mishkin—again, I found his arguments remarkably brilliant and persuasive—I was thinking to myself that I would love to be in a room with you and hear you use those brilliant arguments with, say, a Senate Majority Leader like Harry Reid, or a Chairman of the Ways and Means Committee like Charlie Rangel, or a Chairman of the Financial Services Committee like Barney Frank. We have to be careful of the risk that either you then have them say, "That's fine, but tell me what your employment target is because you have a dual mandate" or you end up negotiating an inflation target higher than you want it to be. I happen to know those three men very well. I have appeared before them—I think President Moskow and I along with President Yellen have probably appeared before the Congress more than anybody else at this table, individually and certainly collectively, and I can imagine that conversation taking place.

So I would proceed slowly, or hasten slowly, not just in the analytical aspect of this but also in explaining why we want to tie ourselves to this mast. Is it that we are afraid of the siren

call of the lack of discipline because we don't think we can bring about the discipline that's required? We need to consider that there are political aspects of this in light of which we may not even want to open that Pandora's Box. That's the only advice I would give or comment I would make at this juncture, Mr. Chairman. Thank you.

Oh, let me make one other comment. I keep hearing about Larry Meyer's poll. We have a dean of a business school; I'm an M.B.A.; and we have other M.B.A.s around the table. Uncertainty is the enemy of decisionmaking. Of course they want more frequent forecasts. Governor Kohn and I talked about this before. They want a full frontal view. I find a full frontal view most unbecoming. [Laughter] Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Speak for yourself. [Laughter] Governor Kroszner.

MR. KROSZNER. I don't know why President Fisher pointed to me when he said that. I do not endorse his approach. [Laughter] Certainly, I think it's appropriate—since we're getting very close to or maybe have passed our lunch, when we'll talk about the 100<sup>th</sup> anniversary of the Fed—that we are thinking about something that is really quite historic here, potentially a major change in the way that policymaking is undertaken at the Federal Reserve. The memo that we have is excellent. The discussion that we have had has been excellent. Even if it has been a bit lengthy, these issues are important, and it takes time to make sure that our views are aired. After all the views that have been aired, however, I can add little, so I'll give just a very short indication of some of my thoughts, keying off what a lot of others have said.

The way that I think about the issue is that we have our dual mandate, and we should do everything thinking about how best to achieve our dual mandate of maximum employment growth consistent with low and stable inflation. The question is, Does being more explicit about what "price stability" means help us to get to our objective better? I think in many

circumstances that it can. People have brought up issues about whether or not it could interfere with that, and it's very important that it not in any way be interpreted, either by the Committee members or the outside world, as being inconsistent with our ability to achieve that dual mandate.

One concern that I brought up yesterday was that I don't think we understand short-run or intermediate-run inflation dynamics very well. I want to make sure that we don't overpromise. When you look at the one example in the Bluebook simulations that gets inflation down to 1½ percent over quite a long period, you see that it would require us to move our policy rate up 100 to 125 basis points for the next year to two years. That strikes me as a very different approach from what many people around the table would be willing to take, although perhaps if we did have an explicit 1½ percent goal, people would be willing to do that. But it's very, very important to make sure that we understand whether we think that's the right path. That is the consideration that President Yellen brought up yesterday. There are a number of issues with those simulations, such as the foreign exchange movements and other things, that may make us uncomfortable with them. If we don't understand the path very well, it is very dangerous for us to be making even long-run commitments to something when we're not quite sure how we can get to it. We know that in the very long run we can get there. But if it's so long that we're not achieving it in real time, that can actually undermine our credibility and make us appear less transparent rather than more transparent. So I just want to make sure that we work very hard to push our understanding of inflation dynamics and that we know how we can achieve the goal if we enunciate such a goal. As I said, in many, perhaps most, circumstances enunciating such a goal can be valuable, although taking a particular number at a particular horizon could be problematic.

To get the main benefits and give guidance to the markets, we would want the goal to be a consensus decision rather than everyone's having his or her own goal, which could result in less transparency and less credibility. I think it could affect the way that we undertake policy. In some sense, if it doesn't, then what's the point of doing it? It has to have some effect; otherwise, it won't be credible to the markets, and then it's simply not worth the candle. As I said, in that context, we have to make sure that we understand inflation dynamics very well so that we can explain to the world what the consequences of the goal would be for maximum employment growth and the evolution of the economy. Thus my main concern is that we don't know enough about the short-run or intermediate-run inflation dynamics to feel comfortable with articulating a goal. We could articulate a goal in a general way—as a range, say—and not be tied down to a particular number that could be revised. That would be helpful; but in making all these decisions, we have to be very mindful about understanding how we can achieve the goal.

CHAIRMAN BERNANKE. Thank you. President Lacker had a two-handed intervention.

MR. LACKER. With your indulgence, Mr. Chairman, I'd like to comment on the role of the dual mandate and sketch out how I'd like to see this discussion evolve. I feel motivated to do this because this consideration has played a greater role in today's discussion than I had anticipated—this is just a byproduct of my own lack of foresight and intelligence, I think—and also because I took swipes at the dual mandate earlier in my career on the Committee and was batted back by previous Vice Chairmen and others. [Laughter] What I want to say first is that I sense a substantial convergence of views. As demonstrated by Governor Kohn's use of the best-contribute formulation, I think there's convergence of the sense of what it means around here. (Governor Kohn's statement, by the way, was outstanding, and I'd associate myself with

all of it, top to bottom.) But I sense that some of our policy disagreements are on occasion interpreted as differences in views on the appropriate weights to place on employment and inflation in a policymaker welfare function or loss-minimization function. Casting it that way tempts one to view those weights as reflecting value judgments analogous, for example, to my preference for grits over eggs at this morning's breakfast.

I realize that what I'm about to say runs a great risk of seeming pedantic and academic, but I think it's important. I'll start provocatively by saying that I don't care about output per se, and I don't think any one of us does, and I don't think any one of us cares about inflation per se. We care about the welfare of the citizens of our country. That's an obvious point to make, but I'll just remind you that the practice of viewing policymaking through the lens of the analytical device of a mathematical policymaker facing a loss function with weights on employment and inflation arose during the 1960s. In contrast, policy analysis everywhere else in economics was grounded in models in which the consumer was actually mathematically present—that is to say, the models treated explicitly the preferences of consumers and then crafted policies to maximize those in a framework in which you could explicitly calculate what consumer preferences were. At the time, the state-of-the-art monetary policy framework did not include consumers explicitly; these were reduced-form models—you know, the Patinkin generation of models. Today, the state-of-the-art monetary models capture a rich array of inflation and output dynamics and do treat preferences of our citizens explicitly. These models are capable of deriving optimal policy, and optimal policy so derived can be represented as the solution to a maximization problem by a policymaker with given weights. But that, of course, is very different from thinking of those weights as stemming from non-economic value judgments about the utility value of employment and inflation. So, in principle, the weights that are most appropriate to use to represent



policymaking can be scientifically investigated. They can be analyzed through models at this level and through the data and can be compared regarding goodness of fit and other measures as well. The congressional mandate in the '70s codified existing practice and encapsulated the notion that we've got weights and that we view ourselves as having a loss function regarding these two things when we really just have one loss function and that relates to our citizens' welfare.

I'd point out that surely we have heavily influenced the interpretation of those mandates. You look at the act, and three objectives are there. I think that we've helped induce people to call it a dual mandate by encouraging them to drop the moderate interest rate objective. So, in principle, we could influence the evolution of popular interpretation and understanding of these other objectives as well. I'd also point out that the way the Congress codified the objectives was without weights, and so the act is not at all inconsistent with the state-of-the-art approach to monetary economics. I say this because I'd like to move us beyond the relatively sterile debates over whether my weight is higher or lower on inflation or output, and I hope that we can evolve in both our discussions about the dual mandate and our analytical approach to the use of it in meetings ahead. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman Geithner.

VICE CHAIRMAN GEITHNER. I'm tempted to say that I was hoping we would run out of time. [Laughter] I'll be very brief. Let me just compliment Don and his subcommittee and the Chairman for how you've laid out the issues. This decision is important to think through carefully, even if we quickly find a comfortable center of gravity. It's going to be consequential, I'm sure.

On the questions—I'm changing them slightly. Would an explicit, publicly disclosed, numerical definition of "price stability" be helpful? Probably, but it depends on how we do it. It depends on what else we do about the way we talk about our forecast, and it depends a lot on how we think through the implications of the way we make policy.

How will, how should, how would, how could the FOMC choose or choose to reveal an inflation objective? Three broad options that are implicit or explicit in this memo are worth thinking through. I'm sure that, if we choose to reveal publicly a quantitative definition of our view of long-term inflation, we have to do it as a decision of the Committee. It's hard for me to imagine how one could do that on the basis of some averaging of preferences, which would change with the composition of the Committee over time. Much of what's been said about the other two choices is right and sounds sensible.

Would the quantification of an inflation objective be a new influence? Of course it would. That has to be why it's worth thinking through. As Janet implied, thinking through what it would mean for our behavior is a critical part of this process. I'm going to discuss the other questions very briefly and make just two points about process.

First, when you look at the broad evidence, I think it is fair to say that the evidence is weak on the achievable credibility gains relative to what we've already achieved. I'm uncertain, of course, whether those gains come from actions over time or what you disclose about your regime, your objectives, your framework. The evidence is somewhat stronger against the concerns of the skeptics and the critics in that there's little basis in the experience of other countries to justify the broad concerns exist—that embracing the softer responsible variants of inflation targeting bring with them too much risk; that you lose flexibility to respond; that you're forced into suboptimal weights among your various objectives; that, for example, you are

compromised in your capacity to respond to threats to financial stability. I'm not sure that's right, though. Of course, we're not New Zealand, Norway, or Sweden. We say that a lot. But we should talk through what it is that makes us different. How are we different, and how might that difference make us view the evidence? In some sense the question we face is, Do the soft variants of the approach offer convincing credibility gains without significantly reducing the risks and concerns that have to accompany consideration of this objective? That basic tradeoff is what is critical.

Second, how do ignorance and uncertainty about inflation dynamics, about the responsiveness of inflation to some of its traditional determinants, about the shape of the Phillips curve, and about inertia and persistence affect our choice of regime? How does uncertainty about all the other dimensions of how monetary policy works and how we measure this affect our choice of regime? This uncertainty is critical to how we choose among alternative paths for bringing inflation back to target, how we choose among alternative horizons, and how we think about policy consistent with those different paths. All the variants of the regimes on the table, all of which are of the softer form, would still force us to be more explicit in public about where we are seeking to move inflation and over what horizon. I think we have to ask ourselves whether we can be confident about how compelling those arguments will be in public given the relative weakness of the analytical foundation that exists to help inform those choices. Even with a no horizon, a long horizon, or a variable horizon approach to the disclosed explicit inflation objective, you don't avoid confronting the choice about your horizon or how you come up with an alternative horizon, and so forth. I think that the dimension of ignorance and uncertainty we live with is inherent, and it is not going to change dramatically over time. Thus it has to inform how we think through these broader options.

The third question is, how would alternative variants to the regime affect the dynamics around the policy setting? As I said, and many others said, they will and must affect it. You have to assume they will. It's prudent to assume they will. It's very important to think through those dynamics. Would we really be comfortable—even in a very long-run horizon, no horizon, or flexible horizon regime—producing a forecast that has inflation staying well above our target for very long periods of time? I'm not sure that you wouldn't want to assume that over time the Committee would be less comfortable with that and want to hope and declare as an objective that we move inflation down quicker over time. I don't think analysis or evidence is going to help us think through those dynamics, but I don't think we can assume them away. I think they're important.

I have two quick comments about process. One is—I'll call it the Kroszner proposal, though he didn't make it. [Laughter] I think we should spend more time, and Don should build into his time frame more in-depth discussion, on what we think we understand about the models that underpin our decisions and what's in those models about inertia and all the fundamental determinants of inflation. We've had a lot of turnover in the Committee. We discussed it once over lightly—in August, I believe. We should discuss it in more depth, at least to make sure we have a common understanding about what we're working with and what the limitations and benefits are relative to the alternatives. Two, I think it's important not to get into the process discussion prematurely. A lot of thoughtful, interesting ideas were put forth about intermediate steps toward some broad change in regime. I don't think it's worth spending a lot of time on alternative variants of the intermediate steps until we've really thought through ultimately where we want to go. If we spend time on and get enough depth about the merits of that choice and we

find some consensus with which we're comfortable, then we can go back and figure out how we want to get there. Thank you.

CHAIRMAN BERNANKE. Thank you. It's been a very long morning. I appreciate everyone's patience in this long but very useful discussion. Let me take just a couple of minutes. I'm not going to try to respond to all the points that were raised. I just want to make just a couple of observations.

There was a lot of discussion about how this would affect policy, and indeed, I think it would affect policy. But, remember, this debate is about communication. I think it's very important that we communicate better. While our policy has been good, we have had difficulties—I certainly have—in communicating with the public and the markets. If we can find a more effective, clearer way to do that, I think the benefit would be significant.

Let me just say a couple of words—and this goes somewhat against Tim's comments—about evolution. Whatever we do, I would agree with several people around the table, should be incremental and evolutionary for several reasons. First, we have to make sure that we understand what we're doing. We have to learn how to implement what it is we're doing. Second, we have to maintain continuity with the previous regime, not have any sharp changes in our policy or our perceptions. Third, a transitional, evolutionary approach will give us a chance to educate the public, educate the Congress, and get some reaction and feedback that will perhaps allow us to make corrections as necessary.

In addition, I think that our steps need to face two real constraints. The first is that we do have a dual mandate—that whatever we may say here, we have to persuade the Congress and the public that we will look at both parts of the mandate and that we will not reduce our interest in employment and output. The second constraint is our institutional structure, the size of our

Committee, and those features that the Bank of England, for example, does not have. All those things have to be factored into our thinking.

Let me suggest a way one might think about proceeding that I think meets some of these concerns. It might be useful, for example, for us at some point to clarify what we mean by the “comfort zone,” a term that is out there and is causing confusion. I would prefer to do it collectively, but we can think about ways of doing that. If we could confirm what the comfort zone is and what it means, I think that would be a step in the right direction. In particular, I would argue that we should define the comfort zone as the range in which core inflation should remain most of the time. Over the past ten years, it has remained between 1½ to 2 percent most of the time. But all we would say about policy is that it should have some bias that will take us, in the long run, back toward that core range.

While not setting fixed horizons on the comfort zone, we need to exploit our projections and forecasts, which can describe to the public what we think the next two years will look like in terms of the paths of inflation and output. I would associate myself with several people who have commented that perhaps the best thing we can do, even if we downplay the comfort zone or the target, is to provide more information to the public about our forecast, more-regular monetary policy reports, and considerably more information about our outlook and our approach. Again, my preferred approach would be to provide some information about the comfort zone. But for the public the big change would be the additional information we’re providing, which would address Meyer’s point about what the public is looking for. When I make the speech describing this regime, I would go so far as to say—and this is a little radical—that the Federal Reserve is not adopting inflation targeting; what we are doing is simply providing more information. We’re providing more information about where the Committee thinks it wants inflation to be on

average over longer periods of time, and we're providing extensive additional information about the forecast and our views about the economy. If we do it that way, we will probably avoid some of the pitfalls that have been mentioned.

Again, I want to thank everyone for terrific input and to note that this process will be ongoing. We are in no hurry. We should go on until we feel that we have a conclusion with which we are comfortable and that we're all willing to support.

Let's confirm that the date of the next meeting is Tuesday, December 12. The meeting is adjourned. Lunch is available next door. Please bring your lunch back, and we'll have a short presentation on the centennial while we're having lunch. Thank you so much.

END OF MEETING