

**Meeting of the Federal Open Market Committee on
September 24, 2002**

A meeting of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington, D.C., on Tuesday, September 24, 2002, at 9:00 a.m. Those present were the following:

Mr. Greenspan, Chairman
Mr. McDonough, Vice Chairman
Mr. Bernanke
Ms. Bies
Mr. Ferguson
Mr. Gramlich
Mr. Jordan
Mr. Kohn
Mr. McTeer
Mr. Olson
Mr. Santomero
Mr. Stern

Messrs. Broaddus, Guynn, Moskow, and Parry, Alternate Members of the Federal Open Market Committee

Mr. Hoenig, Ms. Minehan, and Mr. Poole, Presidents of the Federal Reserve Banks of Kansas City, Boston, and St. Louis respectively

Mr. Reinhart, Secretary and Economist
Mr. Bernard, Deputy Secretary
Mr. Gillum, Assistant Secretary
Mr. Mattingly, General Counsel
Mr. Baxter, Deputy General Counsel
Ms. Johnson, Economist
Mr. Stockton, Economist

Messrs. Connors, Howard, and Lindsey, Ms. Mester, Messrs. Oliner, Rolnick, Rosenblum, Sniderman, and Wilcox, Associate Economists

Mr. Kos, Manager, System Open Market Account

Messrs. Ettin and Madigan, Deputy Directors, Divisions of Research and Statistics and Monetary Affairs respectively, Board of Governors

Messrs. Slifman and Struckmeyer, Associate Directors, Division of Research and Statistics, Board of Governors

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

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

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

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

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

Mr. Moore, First Vice President, Federal Reserve Bank of San Francisco

Messrs. Eisenbeis, Fuhrer, Hakkio, Judd, Lacker, and Steindel, Senior
Vice Presidents, Federal Reserve Banks of Atlanta, Boston, Kansas City,
San Francisco, Richmond, and New York respectively

Messrs. Coughlin, Elsasser, and Sullivan, Vice Presidents, Federal
Reserve Banks of St. Louis, New York, and Chicago respectively

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CHAIRMAN GREENSPAN. The meeting is called to order. Would somebody like to move approval of the minutes of the August 13 meeting?

VICE CHAIRMAN MCDONOUGH. So moved.

CHAIRMAN GREENSPAN. Without objection. Dino Kos, please.

MR. KOS.¹ Thank you, Mr. Chairman. I'll be referring to the charts that were circulated just a little while ago. The top panel of the page 1 shows three-month U.S. dollar cash deposit rates, the libor fixing, and also the three-, six-, and nine-month forward deposit rates, from June 3 to September 20. Since your last meeting, three-month cash and forward rates traded in a narrow range as market participants reacted to mixed economic data. The three- and six-month forward rates continued to trade below the cash rate, suggesting that market participants were assigning some probability to a reduction in short-term rates, especially once the equity markets began to decline again after the early August bounce.

While short-dated deposit rates moved in a narrow range, Treasury yields fell, especially in the middle of the yield curve. As shown in the two middle panels on page 1, yields on Treasury issues have been falling for some time. The two-year note was yielding about 1.88 percent this morning, a new low for that security, with the latest decline in yield coinciding with the equity market sell-off. The most pronounced decline in yields since the middle of August occurred in the five- and ten-year areas. The five-year yield was at about 2.70 percent this morning, and the ten-year yield was at about 3.63 percent. The explanations for the sharp fall in yields are many, though none by itself is fully satisfying. Market participants have cited a weak economy, although interestingly most forecasts for third-quarter GDP were raised in recent weeks. Poor business sentiment was also cited, as were the corporate scandals, geopolitical concerns, and occasional rumors about problems at particular financial institutions.

However, since the biggest moves were in the middle of the curve, it would seem that mortgage hedging was in part the cause and in part an accelerator of the sharp downward move in yields. As interest rates declined since December, the volume of mortgage refinancing increased, prepayments shortened the duration of mortgage portfolios, and the quickest way for a portfolio manager to bring the portfolio duration into alignment was to buy noncallable Treasuries. Those typically are in the five- and ten-year sectors. An added factor in recent weeks has been the expectation by many market participants of increased hedging needs of Fannie Mae, which last week reported a duration gap of minus fourteen months compared with its target of plus or minus six months. Apparently many dealers and investors did some back-of-

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

the-envelope calculations and concluded that Fannie would need to buy a very large amount of Treasuries to close the gap. While there is no evidence that the government-sponsored entity conducted any such transactions in the Treasury market, those who cleverly thought they would front-run Fannie may have added to the buying wave. Not surprisingly in this kind of market, volatilities have been high. The mortgage hedging needs show up in volatility measures as well. The market for options on swaps is a key risk-management tool among investors in mortgage-backed securities. The bottom panel depicts the Mortgage Bankers Association refinancing index and the three-month option on a ten-year swap. Implied volatilities have risen to more than 30 percent along with the recent refinancing wave, as investors tried to stay ahead of the prepayment cycle.

Let me turn to the corporate market on page 2. During the summer the corporate bond market was one of reduced issuance, wider spreads relative to Treasuries, wider bid-offered spreads, and generally reduced liquidity, making it difficult for investors to adjust the risk in their portfolios. In the intermeeting period, the situation improved at the margin, but that improvement was from some very extreme conditions, and sentiment in this market remains very fragile. Spreads on investment-grade debt narrowed to about 225 basis points—still very wide but better than early August levels—as shown in the top panel. Issuance has also picked up, as you can see in the middle panel, though the markets have been very discriminating about which companies have had access. Conditions in the secondary market have improved since your last meeting. Liquidity is reportedly better. And the very wide bid-offered spreads reverted to more-normal levels in the week or two after the last meeting. The high-yield sector showed some signs of improvement in mid-August, as the equity markets rallied and the August 14 deadline for certification passed. But in September, issuance has been weak, and spreads again are beginning to widen. Finally, in the commercial paper market, there has been at least some stability at lower levels of issuance. I would note that one market that has continued to function well is the asset-backed market, including the market for asset-backed commercial paper. But even this development suggests that investors are demanding obligations that have an added dose of protection.

I think investors can be excused if they remain skittish—as one might expect after this year's concerns about accounting, corporate governance, and reduced earning prospects—and if they feel a bit burned by the corporate market. The bottom panel graphs the monthly incremental return that an investor has earned from corporate bonds relative to Treasuries of the same duration. In the early to mid-1990s, the monthly incremental return was about 5 basis points, with a standard deviation of about 29 basis points. Since 1998 that incremental return has actually been minus 13 basis points—that is, the return on Treasuries has been higher—and the standard deviation has more than doubled. In short, investors who have concluded that the corporate market has high risks and low returns would not be out of bounds, at least based on the experience of the past four years or so.

Turning to page 3, Japanese equity markets have fluctuated widely as another fiscal period end approaches. In the run-up to March 31, almost six months ago, there was talk of a crisis in the banking system, given the decline in equity prices on the Nikkei to below 10,000. In response, the authorities imposed a series of rule changes on short sales, which triggered a sharp short covering rally. Last week the markets had to absorb a different surprise when the Bank of Japan announced that it would buy stocks directly from the banks. The announcement had a short-lived effect on the equity market, though bank stocks—the green line in the top panel—did bounce. The effect quickly dissipated since the market is waiting to see what else, if anything, will be done by the government to clean up the bad debt situation. Interestingly, the effect on the bond market so far has been more pronounced. The ten-year JGB yield, shown in the middle left panel, was heading toward 1 percent as gloom about Japan's prospects built up. Over the past three trading sessions the yield shot up from about 1.03 to 1.30 percent, and this morning it was at about 1.28 percent. The irony is that in the near term the announcement has not done very much for stocks but has adversely affected JGB prices, which itself is a major asset class for Japanese banks.

While the long end of the curve is backing up, the short end is in demand, at least for the time being, even at rates that are effectively or actually at zero. The Ministry of Finance's Treasury bill and financing bill auctions have been stopping out at about 0.1 basis point. Now, you might think this would be an asset that would not be in much demand. But the bid-to-cover ratios in recent auctions have been about 700 to 1 or 800 to 1, and in fact, it appears that about half the accepted bids at recent auctions were at par. That is, investors were incurring the administrative cost to buy the bills at no return rather than take the credit risk of just leaving the money in a commercial bank.

As for the banks themselves, they, too, have a lot of cash looking for a home. The middle right panel shows the growth of deposits since the early 1990s and also the contraction of loans during that same period. With that much excess cash sloshing around the markets—and little in the way of investment opportunity—market participants expect the current environment to persist and, if anything, see more of the yield curve get pulled down toward zero. The bottom panel graphs the current yield curve, the solid red line, along with two other snapshots—from one year ago and from eighteen months ago before the Bank of Japan reverted to its zero interest rate policy. The current two-year yield is at about 5 basis points, and the middle of the curve is being tugged lower by the weight of all that cash looking for a home. As yet, however, this strategy has not helped to pull Japan out of its period of stagnation.

Turning to euro area markets briefly on page 4, the top panel graphs the three-month euro deposit libor rate, shown in black, and the three-month, six-month, and nine-month forward rates of that same three-month deposit. Those forward rates, which earlier this summer had been trading at a premium to the cash rate are now trading about 30 basis point below it, despite word from the ECB suggesting that it is very comfortable with the current stance of policy. In part the same set of economic and political factors that affected U.S. expectations are affecting euro area rates.

Forecasts for growth are receding quickly, a fact that has also been reflected in equity markets. European stock indexes have fallen sharply this summer. Since June 3, the Dow-Jones euro stocks index—a broad index of major companies in the euro area, represented by the solid red line—has fallen more than 30 percent, including declines yesterday and today. The sector that has been hit hardest and led the decline is the insurance sector—the dashed red line—which has seen its market value cut in half during that time. Europe’s insurance industry has been hit by losses not only related to the terrorist attacks, the floods in Europe, asbestos suits, and the like but also notably by the sharp drop in equity prices and losses in their credit portfolios. One question that has been asked over the past year or two, as the levels of defaults grew, was which balance sheets were absorbing these losses since few indications seemed to be popping up with banks and securities houses. Well, it has taken a while, but we finally seem to be getting some of the answer. Just for comparison, the U.S. insurance sector has also seen its shares clipped. The dashed blue line is the S&P insurance sub-index, which fell about 20 percent over that period, about the same as the broader index.

Following the pattern of the U.S. and other major markets, long-term bond yields in the euro area have declined as well. The yield on the ten-year bund to take one example—shown in the bottom panel—has fallen about 90 basis points since early June, including this morning’s price action. Given the weakness in major European economies, one might ask why yields, which are still nearly 65 basis points above comparable U.S. yields, did not drop even more. Part of the reason might be the outsized influence of the mortgage market in the United States, but part may also be related to concerns about backsliding on Stability Growth Pact targets by several of the major euro area governments.

Finally, let me say a word on reserves. The graph on page 5 shows the growth of currency over the past two years. During that period, currency grew mostly in a monthly range of 7 to 12 percent; through June the growth rate fluctuated around 10 percent, which was above longer-term trends. Since June, the monthly growth rate has fallen sharply into the low single digits and shows little sign of a turnaround. This has allowed the Desk to slow its outright purchases of Treasury securities and also to reduce the size of its long-term repo book from about \$18 billion this spring to about \$11 billion now.

Mr. Chairman, there were no foreign operations in this period. I will need a vote for approval of the domestic operations. And I’d be happy to answer any questions.

CHAIRMAN GREENSPAN. You didn’t explain why the currency growth suddenly disappeared. Is it international?

MR. KOS. It’s both domestic and international.

MR. REINHART. By our estimates, Mr. Chairman, the foreign holdings of U.S. currency have fallen rather sharply over the last couple of months. Just for background, in 2000 and 2001 foreign holdings were growing at a clip of about 9 percent. Our estimates are that in July their growth was around 8½ percent, and then it slowed to 4 percent in August and actually has contracted in September thus far.

CHAIRMAN GREENSPAN. Is that because of Argentina and Brazil?

MR. REINHART. In terms of the direction, it's a variety of regions.

MR. KOS. It's everything. It's from a number of regions, and there's also a slowing in the domestic component. Really, the growth in currency is slowing in all areas.

MR. REINHART. Domestic currency growth is around 4 percent.

CHAIRMAN GREENSPAN. Do you have any explanation for that?

MR. REINHART. The uncomfortable one is that domestic currency is contemporaneously correlated with spending.

CHAIRMAN GREENSPAN. The question is, is it? No, let me put it this way: What is the correlation between currency outstanding and spending, let's say, knocking off the \$100 bills which—

MR. REINHART. The domestic component of currency is correlated with contemporaneous spending. The correlation is not particularly high though.

CHAIRMAN GREENSPAN. Something like .3?

MR. REINHART. I hesitate to give you a number, but we certainly will.

VICE CHAIRMAN MCDONOUGH. Unfair question, good answer.

MR. BERNANKE. The last time we had a Middle Eastern conflict, in the Gulf War, I think currency went way up. Is that right?

CHAIRMAN GREENSPAN. The inflation rate was much higher then.

MR. REINHART. Actually, Mr. Chairman, in terms of a staff model of currency the r squared is around $\frac{1}{2}$, and it's highly correlated with nominal PCE with a significant t statistic.

CHAIRMAN GREENSPAN. What is happening to corporate yields in Japan? What do the spreads look like? We very rarely hear discussions of that.

MR. KOS. It's an excellent question. And the problem at least in part is that the data are not great. What one hears are anecdotal reports.

CHAIRMAN GREENSPAN. I'm just asking about prices. Do you mean the prices are not available? You don't have them?

MR. KOS. Yes, but I think what people typically focus on is the cost of credit, which often is provided by the banks. So if the question is what is the cost of credit and the borrower is getting credit from the banks, that information is a little harder to get. I don't have the exact spreads on the tip of my tongue.

MS. JOHNSON. Mr. Chairman, I do.

MR. KOS. Oh, do you? Good.

MS. JOHNSON. I have a chart of Japanese corporate versus government debt spreads. The AA has been a little choppy, but the spread is about 15 basis points; the BBB is around 50 basis points. Both have been spiky, up and down a bit, in the last week or so.

CHAIRMAN GREENSPAN. But the spreads are not rising?

MS. JOHNSON. There is no discernible trend.

CHAIRMAN GREENSPAN. The reason I raise the issue is that if there is a propensity to hold JGBs for fear of private credit risk, especially in the banks, one would have expected a

very significant opening up of corporate yields. And I gather your chart doesn't show that.

Unfortunately, the Japanese don't have a securities market in the sense that—

MS. JOHNSON. Right. I can't tell you what issuance has been, so I have no idea if this is a reflection of no issuance and no trading and so forth. Actually, the spread has been trending down a bit in the BBB from the middle of this year to most recently. So there is no sign here that spreads are blowing up or even widening.

CHAIRMAN GREENSPAN. I've tried to make a big point that the Japanese don't have a securities market and that all of their intermediation is in banks. I guess it's true! [Laughter] President Poole.

MR. POOLE. I just want to offer a quick observation. You talked about the tremendous oversubscription on the Japanese Treasury securities despite little or no yield on those investments. Given that there's an obvious alternative, which would be U.S. Treasuries that have a positive yield, there must be an overwhelming view in Japan that the yen if anything is going to appreciate, not depreciate, against the dollar. Otherwise one would think that there must be some important institutional constraints or the Japanese would be putting money in Europe or the United States.

CHAIRMAN GREENSPAN. I think the answer from all that I've seen—and I've looked at this in considerable detail—is that one cannot explain these yield differentials without adverting to some notion of the equivalent of “Buy American” in Japan, where in a sense the presumption is that one must support Japanese institutions. I say that because there's just no credible argument for these yields—well, maybe for the short-term securities but not ten-year JGBs—given the fiscal outlook and the demographic outlook.

MR. POOLE. Unless one is convinced that the yen is going to appreciate over the long run against the dollar. Otherwise it just doesn't fit.

CHAIRMAN GREENSPAN. Yes, and that argument—

MR. POOLE. It doesn't make any logical sense either.

CHAIRMAN GREENSPAN. Exactly. So I conclude, merely as a fallback explanation—having examined à la Sherlock Holmes all of the alternatives and found them wanting—that therefore the missing alternative must be the true one. But that is the type of reasoning that the logic courses will tell you is very, very fragile. President Jordan.

MR. JORDAN. Thank you. Dino, with regard to your reference to the possibility that the decline in longer-term U.S. Treasury yields is associated with Fannie Mae's hedging needs, I've seen that mentioned in the press too. I know nothing about the flows through Fannie Mae. But the presumption must be that the amount that they require compared with the floating stock is quite large and—it's sort of a tomato crop theory of bond pricing here—that Fannie has to do something else. I don't know what the other balance sheet entries are. What else do they do or not do if in fact they do buy ten-year Treasuries to hedge?

MR. KOS. Let me make two points, President Jordan. First, the commentary from the markets was that generic mortgage hedging and hedging of mortgage-backed securities portfolios was associated with the decline in yields, which was one aspect of the story. Then in the last week, since Fannie Mae announced its duration gap, this other aspect arose, which was the expectation that Fannie Mae itself would be jumping into the hedging game. Now, in talking with dealers, nobody has seen any of these flows. And Fannie Mae in other settings has said that they really don't use Treasuries in this way. There are other alternatives they could use to try to bring down the duration gap—a step-up in purchases of mortgage-backed securities, for

example, or an accelerated calling of debt—short of actually doing what people expect them to do. And Fannie is fairly sophisticated, enough so that they probably would not do what everybody expects.

MR. JORDAN. Okay. But that still leaves me a little puzzled about how good of a hedge this is. Except for the idea of callable debt, which I hadn't thought about as a course of action they could take, what are the alternatives? If they had previously hedged, whether by using ten-year Treasuries or something else, and we got this kind of decline in mortgage rates, then the hedge could work. The gains on the Treasuries, if that's what they hold, would compensate them for their losses on the mortgage portfolio. But in their case it's certainly not apparent to me that the inverse is true. Somebody else, a mortgage banking company, for example, can do that. If rates rise, they have a loss on their Treasuries, and they have a gain on their mortgage portfolio. Is that possible with Fannie Mae? I can't see them going out and saying, we will take losses on our hedge portfolio and we're going to sell something else and take gains on it.

MR. KOS. I can't speak for the interworkings of how they manage their hedging. What I was trying to do was to explain the commentary in the Treasury market. My point was that Fannie Mae has other means of hedging—alternatives in terms of accepting the risks, which may have an impact on their earnings if rates go the wrong way on them. So my message was that the course of action that was expected by some in the market and that was showing up in *Wall Street Journal* articles was not necessarily the one they had to follow.

MR. JORDAN. I understand, but it still leaves me uncomfortable thinking that hedging activities by Fannie Mae work the same way as hedging activities by anybody else. That's not

obvious to me, given the nature of what they would have to do if rates were to move substantially against them.

MR. KOS. That's a possibility, yes.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Mr. Chairman, you and President Poole partially answered the question I wanted to ask. I was going to ask Dino what his answer would be if his second cousin from Texas called him and asked why people in Japan were willing to go to the trouble to buy a bond with zero interest. I can see that there may be a patriotic reason to keep the funds in Japan or an exchange rate risk reason not to invest in assets of other countries. But what about the alternatives of keeping the money in a suitcase or a safe deposit box?

MR. KOS. Well, I think some of that is going on as well, though perhaps not as much as in Argentina where people have been buying safes. But certainly we have heard some commentary about people keeping cash as opposed to putting it into a bank. Let me make one other point regarding your question about why residents haven't taken their money out of Japan. There is a risk aversion aspect related to the fact that several times in the last ten years when money has started to flow out there have been exchange rate losses. The most prominent case was in 1988 when the exchange rate began to depreciate rapidly and the Ministry of Finance began intervening aggressively to cut off that avenue. They basically said we're not going to let the yen depreciate. As a consequence, there was a 30 yen swing the other way in a matter of days. That kind of experience is something that stays with people; they remember the pain, and that makes them risk averse for the future until that memory wanes. So I think that's another aspect that we shouldn't overlook.

MR. MCTEER. But why bonds rather than literally hold cash in Japan?

MR. KOS. Well, I think in part there may be an aversion to credit risk. Earlier this year we were hearing that one thing the Japanese banks were doing to fund their dollar assets was foreign exchange swaps, swapping U.S. dollars for yen. They were doing these trades with foreign banks, non-Japanese banks, which then had yen that they were raising effectively at negative interest rates. So what one could then do was to invest at zero and still capture a positive margin. You would rather buy a bill at zero, let's say, than put funds into a bank where you didn't like the credit risk. So that was one class of action where it was rational and it made sense. There are other classes I gather that I'm having a harder time trying to explain.

CHAIRMAN GREENSPAN. Any further questions? Vice Chair.

VICE CHAIRMAN MCDONOUGH. Move approval of the domestic operations.

CHAIRMAN GREENSPAN. Without objection. We now move on to David Stockton and Karen Johnson.

MR. STOCKTON. Thank you, Mr. Chairman. A year ago, as we gathered here to discuss the outlook, we on the staff struggled mightily to make a useful contribution to the economic analysis of the fallout from the unprecedented terrorist attacks that had just occurred. For once, the overused phrase of economic forecasters everywhere—that the uncertainties are unusually large—was actually true. Although we made an effort at the time to present what we thought was a balanced forecast, it seemed much easier for us to envision the downside risks to that projection. In the event, developments during the past year have, at times, reminded me of crossing the street in London; I'm often so focused on looking to the left, that I don't see the car coming from the right that's about to hit me. Similarly, amid all the concerns raised by those terrible events, we simply didn't anticipate the upturn in activity that was about to commence. That upturn is now nearly a year old, and we see its continuation as the most likely outcome. But significant questions still attach to the strength of this expansion.

On that score, much of the recent news has been on the positive side of our August projection. In particular, the data on domestic spending have been almost uniformly stronger than our expectations. The most striking example has been sales of new motor vehicles, which not only didn't retreat after the incentive-induced surge to 18 million units at an annual rate in July but actually increased still further in August to 18½ million units. Even apart from motor vehicles, consumer spending appears to be on track to post a solid gain—nearly 3 percent for the quarter, which is

about ½ percentage point faster than we had projected last month. To be sure, the housing starts figures for August came in a bit below our forecast. But permits edged up for the month, homebuilders' surveys remain quite positive, and there are few reports that any noticeable softening has occurred.

Moreover, favorable developments have not been confined to the household sector. Readings on shipments for July suggest that outlays for equipment likely increased sharply. Indeed, adding in the apparent strength in transportation equipment, we are projecting a 10 percent annual rate increase in E&S spending in the current quarter, more than twice the pace we had projected in August. And those gains have been widespread, with spending in most major categories coming in above our expectations. Of course, a few bleak spots remain in the business spending picture: Outlays for communications equipment have shown no sign of improvement, and the overhang of vacant space continues to weigh heavily on the nonresidential construction sector.

Taken together, private domestic final demands—that is, consumption plus investment—are projected to rise at a 4¼ percent annual rate in the current quarter, nearly 1½ percentage points faster than in our August forecast. We believe that some of that strength in sales is coming out of inventories, and thus our upward revision to the growth of real GDP was a smaller ½ percentage point, bringing the projected increase in the current quarter to 3¼ percent. Moreover, that upward adjustment comes on the heels of what we expect to be a similar-sized upward revision to the second-quarter GDP figure to an annual pace of about 1½ percent.

Despite these favorable developments, we have carried none of that stronger near-term growth forward in the forecast. Rather, we have revised down the growth in real GDP over the next few quarters by enough to offset those upward revisions, so that the level of output we are projecting for the fourth quarter of next year is about unchanged from our previous forecast. In fact, we are expecting growth in activity over the next four quarters to be little different from the pace of expansion that we have experienced over the past four quarters. So, what gives?

There are several reasons why we have made largely offsetting adjustments to our forecast, despite the stronger incoming readings on real GDP. One reason is that the end of the inventory liquidation—at least outside of the motor vehicle sector—seems to have occurred more quickly than we had previously anticipated, and thus the positive contribution to growth from the swing in inventory investment is not expected to be as large going forward. A second reason is that we are skeptical that the recent strength in the orders and shipments figures is yet signaling a substantial acceleration in capital outlays. The data are noisy, and we are expecting a sizable portion of the jump in July to be reversed over the next couple of months. Our estimates for industrial production of business equipment have not shown the degree of improvement implicit in a literal read of the July shipments figures. I'd also note that the IP measures for these categories line up reasonably well with the anecdotal reports we have received from businesses—reports that for the most part have

remained lackluster. Moreover, some of the recent surprise on equipment spending has occurred in business purchases of motor vehicles and deliveries of aircraft, areas where we expect outlays to drop back in the months immediately ahead.

Labor market developments also support a cautious approach to the recent spate of solid spending data. Employment has been moving sideways in recent months, and hours worked have, on net, continued to drift down. The increase in initial claims over the past few weeks might even suggest some deterioration in labor market conditions. Current levels of claims are more consistent with small aggregate job losses than the small increases that we have incorporated in the forecast. We would have been less troubled by the recent behavior of the labor market if that was the only signal of weakness. After all, a drop in hours might be taken as just a sign of faster growth of labor productivity. But the fact that the signal from the labor market seems to have been corroborated by weakness in industrial production has given us pause. Factory output excluding motor vehicles has been flat since June. And that pattern seems consistent with the surveys of purchasing managers, the discussion in the Beige Book, and the reports we have received from our business contacts. Although we do not read the recent data on the labor market and industrial production as signaling an impending return to contraction in activity, we do believe that these developments constitute downside risks to our projection—ones that counterbalance the upside risks associated with the recent strength in spending indicators.

Our forecast now anticipates that growth of real GDP will not move above that of potential until the second half of next year. The basic minuses and pluses in the outlook remain much the same as they were in August. On the minus side of the ledger, households are expected to continue to restrain their spending in response to the considerable hit taken by the asset side of their balance sheets. And we anticipate that the general climate of caution pervading the business environment will be worn away only slowly as profits continue to recover and as overhangs of unused capital are reduced. On the plus side, we believe that with real short-term interest rates close to zero, monetary policy is set to facilitate the process of balance sheet repair, to stimulate interest-sensitive spending, and eventually to contribute to above-trend growth as the factors restraining demand abate over the next year or so. An associated drop in the exchange value of the dollar and further impetus to aggregate demand from the federal government add to the pickup in activity that we believe will become more visible by late next year and into 2004.

Once again, in assembling this forecast, stronger spending data and weaker hours have confronted us with the challenge of interpreting another apparent outsized increase in labor productivity. We project an increase in nonfarm business output per hour of about 4 percent in the current quarter—a figure which, if realized, would bring the four-quarter growth in labor productivity to about 5¼ percent. Of course, there are still plenty of missing data for the third quarter to prove us wrong, and, as we are reminded every summer, all of these figures should be viewed with some suspicion before they go through an annual revision. But even assuming that there was a two standard-deviation downward revision to productivity—and there is no

reason to think a downward revision any more likely than an upward one—output per hour would still be up more than 4 percent over the past year.

Unlike the astonishing 7 to 8 percent increases that we saw at the turn of the year, the more recent increases are almost certainly not the result of businesses being surprised by unexpected strength in demand. And as I noted in the July chart show, we don't believe that an adjustment cost story, at least in its conventional rendition, can be quantitatively large enough to explain the upswing in productivity. One obvious explanation for the performance of the past year is that structural productivity is growing more rapidly than we are estimating. As you know, we did not make that our baseline interpretation, but we do see it as a decided risk to our forecast. An alternative simulation that we included in the Greenbook showed that faster growth of structural productivity would boost projected growth of real output, lower the unemployment rate, and put core inflation on a more pronounced downtrend.

We think a more likely explanation is that firms, finding their profit margins still under enormous pressure, are discovering ways to utilize existing resources more intensively. In some cases, that may mean working their employees even harder than before and harder than might be sustainable over the longer haul. In other cases, profit pressures may be forcing organizational innovations or efficiency enhancements. In still others, businesses may be more fully and effectively utilizing some of the resources, especially capital equipment, that they acquired during the boom years. There are limits, of course, to this process, which is ultimately governed by the underlying rate of technical progress. The problem is that we don't really know where those limits are. In this forecast, we expect productivity to grow more slowly in the quarters ahead. But in contrast to some of our forecasts earlier in the year, we do not expect any reversal in the recent gains, and we have held the level of productivity further above our estimated structural trend and for a longer period of time than would be suggested by our models. We think this strikes a reasonable balance, but needless to say there are considerable uncertainties here.

An implication of this revision to our productivity forecast is that the labor market remains softer for longer than in our August projection. We have also revised up our forecast of the unemployment rate, in part because of weaker prospective employment growth and in part because we have now assumed that temporary extended unemployment compensation will be continued through 2004 rather than ending in the middle of 2003. All told, the unemployment rate now remains at or above 6 percent through next year, before declining to 5¾ percent by the end of 2004. This level for the unemployment rate is higher than would be suggested by an Okun's law relationship, reflecting the implications of our above-trend forecast for productivity and the effects of the unemployment insurance program. Should you be worried about that? I don't think so, largely because over relatively short periods of time Okun's law is obeyed with roughly the same frequency as a 65 mile an hour speed limit on the New Jersey Turnpike. [Laughter]

With the unemployment rate remaining well above our estimate of the natural rate, it might appear surprising that core consumer price inflation falls only a bit more than $\frac{1}{4}$ percentage point over the forecast interval. But we think there are several reasons for only a modest decline in underlying inflation going forward. First, as we discussed in July, price inflation appears to be less sensitive to resource utilization in recent years than previously. Second, the noticeable benefits that we were getting earlier from the effect of a rising dollar on import prices reverse somewhat over the next two years. And finally, the recent small upside surprises on actual inflation and the approximate stability of most measures of short-term inflation expectations suggest that there is likely to be considerable inertia around recent rates of inflation. Taken together, these influences lead us to expect declines in inflation through 2004, but only small declines. Karen will now continue our presentation.

MS. JOHNSON. The staff outlook for real economic activity in the rest of the world is slightly darker than that we presented in the August Greenbook, as some of the recent data have failed to meet our expectations and have disappointed markets. In response, we have revised down a bit our outlook for foreign real GDP. We still believe that the most likely outcome will be that output growth abroad will generally strengthen in 2003, and we have now added some further projected acceleration in 2004. But downside risks seem to predominate, and the rebound from global weakness in 2001 remains uneven and still a bit elusive.

The occasion of the IMF and World Bank annual meetings later this week prompted me to look back six months to their spring meetings to assess how economic and financial developments over that interval compared with our expectations at that time and to look for factors at work during that interval that will have implications for activity abroad during the forecast period. In March our expectation was for a general strengthening of output growth abroad throughout 2002 that on average characterized both the industrial countries and the developing countries. Not surprisingly, the actual course of economic events was less smooth than that. Foreign growth surprised us on the upside in the first half of the year, particularly for the industrial countries. Nevertheless, we now see real GDP growth in the industrial countries in the second half of this year and the first half of next year as likely to be weaker than in our March projection and below that now reported for the first half of this year.

The reasoning behind our projection of near-term weakness in the industrial countries differs importantly for Canada on the one hand, and for Japan and the euro area on the other. In Canada, real GDP growth during the first half of the year was exceptionally vigorous at an annual rate of more than 5 percent. Growth at this pace is not sustainable and poses the risk of triggering inflationary pressures if it were to continue. Accordingly, the Bank of Canada has raised its policy rate 75 basis points since March—a pace of policy tightening that exceeded what we had incorporated into the March Greenbook. The effect of these higher rates on both consumption and fixed investment should become evident over the next several quarters. In addition, a swing in inventory behavior made a substantial contribution to growth in the first half

of this year but should prove to be transitory. Finally, the pattern of U.S. real output growth is of particular importance for Canada. Taken together, these factors paint a picture of moderate, rather than blistering, growth in the near term that continues over the forecast period.

In contrast, Japan and the euro area both appear to have experienced some good fortune in the first half of this year after negative real GDP growth in the fourth quarter of last year. But both have as yet failed to develop any momentum that would sustain demand and lead to a firming of recovery. In Japan, double-digit export growth more than accounts for the rebound in real GDP over the first half, as domestic demand again contracted on balance. Much of the increase in exports was to other economies in Asia, and we do not see the scope for export growth to continue at its recent pace. Given the ongoing problems in Japan of financial sector weakness, monetary and fiscal policy inaction, and moderate deflation, we expect that domestic demand will not expand enough to result in anything other than weak growth over the forecast period.

In the euro area, the expansion in the first half was the result of improved net exports and a boost from reduced inventory liquidation. In our forecast, we have these factors continuing to contribute, albeit at a reduced rate, along with some rebound in final domestic demand to yield relatively weak real GDP growth for the next several quarters. Subsequently, acceleration in fixed investment and consumption should boost growth to between 2½ and 3 percent during the second half of next year. The continued listless performance of the German economy is a major factor behind the subpar outlook for the euro area. Declining equity prices and global financial market volatility over the past several months have undermined business and consumer confidence in the euro area. German stock prices have fallen further over the intermeeting period as European insurance companies, in particular, have been hit hard by portfolio losses and high claims.

With output growth in the euro area remaining weak and showing no sign of rising soon, the ECB has left rates unchanged since November 2001. This contrasts with our previous expectation of an increase of 50 basis points during the current half-year. Long-term interest rates have responded by moving down about 90 basis points since March, of which more than 20 basis points have been since the August Greenbook. Automatic fiscal stabilizers are providing some support to demand, but the deficit limit of 3 percent of GDP set by the Stability and Growth Pact is constraining fiscal policy in Germany. On balance, we expect that recovery of euro area output growth will firm by the middle of next year but recognize that currently there seems to be little upside risk for such a forecast.

Among the developing countries, the emerging economies in Asia and Mexico are projected to show strength and to experience a return to vigorous growth by the end of the forecast period, although the pattern is expected to differ across these countries. Elsewhere in Latin America, financial and political stresses are likely to keep growth significantly reduced for some time. Economic activity in China, which did not

slacken significantly in 2001, has provided some stability and strength to the Asian region throughout this year. In several of the emerging Asian economies, including Singapore, Malaysia, Taiwan, and Korea, rebounds in high-tech production and exports have been important elements in sustaining expansion during 2002. Although domestic demand has provided a boost to output growth in some Asian economies—particularly China, Korea, and Taiwan—we see this region of the global economy as vulnerable to a downturn in the global high-tech sector and to reduced demand for their exports to the United States and other industrial countries. Accordingly, continued expansion in emerging Asia would be threatened should the pace of growth on average in the industrial countries over the next few quarters be weaker than we now expect. Similarly, our forecast that the recent bounceback in Mexican output will prove durable is especially dependent on the path of output and demand in the United States.

Overall, the slightly gloomier tone to the staff outlook this time does not arise from a judgment that the global high-risk spots, such as Brazil, are now more likely to experience severe crises or to cause greater spillover effects on other countries. Rather, it is that, among the major foreign industrial countries, only Canada has experienced a robust recovery. The failure to date of the euro area and of Japan to move beyond sluggish growth to a pace that reduces excess capacity and triggers a revival of investment spending is reflected in the small downward revision that we made to our projection for near-term foreign growth. And it is a negative risk factor for our expectation that, later, output abroad will move closer to its trend rate of expansion. That completes our remarks. We'd be happy to answer any questions.

CHAIRMAN GREENSPAN. Questions? President Broaddus.

MR. BROADDUS. I have a question for David. The staff forecast certainly seems reasonable to me, David, but obviously there are always risks of error on both sides of a forecast such as this. In that context, I always find the alternative scenarios provided in the Greenbook helpful and useful to think through. With that in mind, I would ask, Have you considered an alternative scenario that combines several of the downside risks covered in your simulations or maybe even adds a couple? One could think of a situation where investment remains weak, housing activity stops, and there is heightened fear of a terrorist attack because of some event somewhere in the world that keeps consumers out of shops for a while. One could perhaps add in for good measure a further slump in the stock market. What I'm trying to get at here is, What kind of conditions would be required to push us into a deflationary situation? And if we were

confronted with such a situation, how persistent would that be and how responsive would it be to the policy actions we might take?

MR. STOCKTON. Let me make a couple of remarks on your points. Obviously, we can construct considerably grimmer scenarios than the ones we presented in the Greenbook. And as I think we've mentioned on a couple of occasions, that is an area of research we're working on. One of the weaknesses in the alternative scenarios that we present to you is that we would like to consider the covariance of the possibilities of these scenarios in ways we think this type of analysis does not adequately capture. So, the thrust of your concern is a good one, and it's one that I think we need to address better going forward.

We have run stochastic simulations of the model using our baseline forecast to look at the probability that we would hit the zero bound. I think this moves in the direction you're suggesting. In those scenarios, depending on how we characterize the monetary policy reaction function—and, again, those scenarios depend importantly on that specification—we come up with a probability of between 15 and 25 percent of running into that zero bound over the forecast period. That is noticeable. Obviously, given the confidence interval on the forecast going out, it probably shouldn't be too surprising that there would be the possibility of a series of bad shocks that would lead to that situation. It certainly isn't trivial in my view.

CHAIRMAN GREENSPAN. Incidentally, am I correct that there has been a fairly significant increase in corporate liquidity in the last year or so?

MR. STOCKTON. Yes, corporations have been taking advantage of what has been a receptive bond market to acquire a lot of liquid assets and in fact have a lot of liquid assets on their books.

CHAIRMAN GREENSPAN. There's been a grossing up in a sense.

MR. STOCKTON. Yes.

CHAIRMAN GREENSPAN. Is it basically long-term liabilities and short-term assets, as best we can judge?

MR. STOCKTON. Yes, we've seen an increase in both. As I think we showed yesterday in the staff briefing, the ratio of liquid assets to total assets has increased in the corporate sector over the past year or so.

CHAIRMAN GREENSPAN. So that can be read in one of two ways or perhaps even in two ways. One is that it is a measure of the extent to which caution has confronted the business community in the last year and they are feeling vulnerable, which is the other side of pulling back on capital expenditures. On the other hand, corporations have the cash available to use in the event they need it. So we may have a significant increase in the financing gap, but it could very readily be accommodated disproportionately from a reduction in liquid balances as distinct from further increases in debt.

MR. STOCKTON. Yes, I would agree that that's the general picture we see currently. The weakness in borrowing has been largely demand-driven, not a supply constraint. Better corporate credits can go to the market and raise funds. They have been doing that, presumably in some sense to protect themselves against markets that might turn less receptive in the future. But the weakness in borrowing also reflects the fact that corporations have accumulated these assets because they have not been doing a significant amount of investment—indeed have been liquidating inventories—and reducing the demands for those credits.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you, Mr. Chairman. It's a comfort to me to know that Al Broaddus is worrying about deflation because it means that I'm free not to give it much thought.

[Laughter] I want to ask Karen a question about Canada and how much we really know about the current situation as a basis for the staff forecast. In your staff's pre-FOMC briefing to the Board yesterday there was a comment in the text that the housing market in Canada is expected to slow. And there's a chart in your material that depicts the spike in housing starts and employment this year. But Canada's population is less than that of California. Canada has had an increase of a half million in employment and 40,000 in housing starts in a year. Do we have current, reasonably reliable information on what has happened during the last year to their legal and illegal immigration, especially as we make it more difficult to get into this country? I know that the ferry running from Kingsville to Sandusky always used to be completely full going in one direction and none of the passengers spoke English, but immigration via that route is being controlled for the first time in my memory. Do we know anything about what is going on up there?

MS. JOHNSON. To be honest, I don't. I sincerely hope that there are many people who for other reasons are paying a lot of attention to immigration controls in Canada. But it is not something that has been raised in the context of the economic debate about the reasons that Canada has led the way in this recovery. They have had a housing boom in terms of house prices and housing starts. And part of the story is that they have had an auto boom that is, I'm sure, to some extent a part of and derives from the U.S. auto boom. They have not had the same degree of capital overhang that we have experienced, and for that reason they see themselves as having a recovery that has fewer headwinds. In reality they have been out in front of us. I wouldn't rule out the thought that immigration has something to do with it. I just honestly don't have an answer for you.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. I have a question for you, David, about the discussion on productivity in your remarks today and also the alternative scenario with faster productivity growth included in the Greenbook. You talked about two possible explanations for this extraordinary growth in productivity. One is that structural productivity has increased, and you deal with that in the alternative scenario. The second is that employers have employees working harder, and I think you added organizational efficiencies to that as well. Some research we've done in Chicago would suggest that if employers are having employees work harder, employees also are going to be working longer hours. But, of course, as you said, the hours worked have been drifting down, and overtime hasn't increased significantly. So I'm just wondering how you reconcile those facts with this favored explanation of the higher increase in productivity growth?

MR. STOCKTON. First, let me say that I wouldn't necessarily characterize it as a favored explanation. In fact one of the ways that I mentioned in which businesses could be getting more output out of their existing resources is that they actually are learning how to use the equipment that they currently have available to them. The capital overhang may be allowing businesses to raise output without adding a significant number of workers because they are using their equipment more efficiently. So it isn't just the employee margin. You're right, certainly, in suggesting that the flatness in the workweek is not consistent with working employees harder. Don't forget, though, that the workweek that we measure and that we know anything about involves just production worker hours. One can certainly imagine in the service economy that some of the efficiencies have been achieved by cutting out white collar, middle manager types, whose workweek is not measured in our employment survey, and working the remaining managers longer hours. So some of that could be going on as well. That's the only way to reconcile the two because, as you point out, there is a tension between the production worker

workweek and what we're actually seeing in productivity. My guess is that a few of these things actually are going on in different sectors and in different areas. Some may involve more efficient use of capital and some may just reflect working workers harder. The point would be in some sense that one couldn't look at the recent behavior of productivity and necessarily expect it to continue indefinitely at that pace because taking up slack in overall resource utilization is one of the ways in which these gains are being achieved.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Thank you, Mr. Chairman. Dave, when I read the Greenbook one of the things that struck me was how little inflation is projected to decline over the period. I appreciate your taking the time to explain why that is the case. But it seems to me that over a two-year period a more conventional rule of thumb—along the lines of what would come out from a Phillips curve analysis—would have the inflation rate going down maybe not to where AI was talking about but close to ½ percent. The chance of that happening doesn't seem to me to be small. I believe that there is some significant probability that it could occur. Did you think in terms of what the chances were that some more traditional relationships could reassert themselves and how significant that might be?

MR. STOCKTON. Obviously, there are many different estimated Phillips curves. Our forecast actually is reasonably consistent with our estimates of the Phillips curve. Ours at least has a relatively small coefficient on that gap variable. So I don't think we view this forecast as necessarily at odds with our estimated relationships. As I indicated, we think we're already seeing some significant swing in import prices; they had been declining about 3 percent in 2001, and we think they are likely to be rising about 3 percent by some time next year. That's a swing of 6 percentage points. We don't see a lot of erosion in short-term inflation expectations, and

long-term inflation expectations have come down only some. So there could be some risk of a more significant break on the inflation expectations side that would allow inflation to come down more sharply. Knowing how sensitive the results of those models are to specifications, I certainly wouldn't want to rule out the kind of figures that you cited. We get numbers like that, for example, in Phillips curves that use capacity utilization rather than the unemployment rate, and there's not a lot to differentiate models that use those two variable measures. And as you pointed out, rules of thumb based on past Phillips curve experience would suggest a more pronounced downdrift in inflation than we're showing here.

MR. PARRY. Thank you.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Karen, I was going to ask you why Canada has done so well in terms of economic growth and if you thought that the relatively long term decline in the Canadian dollar rate was a primary factor. I don't believe you mentioned that in responding to Jerry earlier.

MS. JOHNSON. No, and I think that is a good point. I appreciate your mentioning it. The industrial country that on the whole did the best through the recent downturn and the upturn is Australia. I've asked myself over and over again why it is that Australia has done so well. And now in terms of the recovery, Canada is coming right behind them as an economy that is outpacing ours and outpacing those of all the other industrial countries. Some people when they talk about both of those countries, but mainly Canada, point to the fact that their exports in particular are commodity based. But it goes against everything I think I understand about the global economy to believe that during a downturn those economies would fare better rather than worse. They typically are hit harder as manufacturing falls elsewhere; there's an accelerated effect on the demand for their exports. It usually makes them more vulnerable rather than less.

But both Australia and Canada are economies that have had substantial currency depreciation. They have allowed that to happen—have not resisted it by tightening monetary policy—and have not suffered particularly on the inflation front as a consequence for a host of reasons that we've talked about before. We've discussed, for example, whether the global economy is more competitive and so forth and whether inflation targeting per se has helped to make that happen. They have enjoyed some relative price advantages. Canada is an energy exporter, or at least self-sufficient in that regard, and that may help to some degree in this environment as well.

MR. MCTEER. Does this lead you to believe that we could use a little more currency depreciation ourselves?

MS. JOHNSON. Well, I'm always the one who is sitting around worrying about the current account deficit and our net external indebtedness. It's not that I don't think the U.S. economy can be maintained at full utilization of its resources either way. But I think that in the long run some dollar depreciation is a necessary step, so I don't regret it when it comes along.

I am skeptical that the Canadians, because they are the tail and not the dog of North America so to speak, can sustain such strong growth any more than Mexico can sustain strong growth when the U.S. economy is not performing well. So for those reasons we do expect to see the Canadian economy conforming more to other industrialized economies and experiencing growth closer to their long-term average, more along the lines of what ours is doing.

I will say that one Bank of Canada analyst whispered the word "productivity" in my ear not too long ago. And I have suggested to some of our people that we look to see if we can find some answers there because that is the one area we thought the U.S. experience might most readily be replicated in Canada. So maybe they are beginning to experience the initial stages of some of the developments that occurred in the U.S. economy three or four years ago. No doubt

it's a mixture of all these things—some exchange rate depreciation, some success in getting their inflation rate down, a housing boom, an auto boom, and in general a working out of the inventory cycle and less perceived overhang of capital—that together add up to the stronger Canadian performance.

MR. MCTEER. Thank you.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you. Dave, you mentioned along the way that the initial claims data seemed more consistent with small declines in employment rather than small increases, and yet you've maintained the small increases in the Greenbook forecast. Could you give me a sense of your thinking that has led to that more optimistic conclusion?

MR. STOCKTON. Sure. One factor was that when we put the Greenbook to bed we had only one week of initial claims at 424,000. [Laughter] Claims data are volatile enough that we just didn't take seriously that one week's data. Now, that level was sustained last week. There was an old rule of thumb in the division that we had to see at least three successive weeks of evidence in the data before we took it seriously. I don't know if that's quite the right number of weeks, but at this point, if that level of initial claims were sustained going forward or rose even further, I think we would have to revise our employment forecast.

CHAIRMAN GREENSPAN. If nobody else has any questions, who would like to start the general discussion? President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. On balance, the recovery in the Seventh District economy appears to be continuing but at a slow and uneven pace. At the last meeting I mentioned that I had started to receive some upbeat reports from a number of highly placed contacts. Unfortunately, the optimism has not spread, and in some cases it has waned rather

suddenly over the past few weeks. For instance, a national retailer specializing in home furnishings and a large appliance manufacturer both reported that, after a very strong first half of the year, sales growth slowed significantly starting in mid-August. And a large manufacturer of high-tech equipment indicated that industry demand had slowed suddenly over the past four weeks. These anecdotal reports are consistent with the drop in the Chicago Purchasing Managers' Index from 54.9 in August to 48.1 in September. That will be the first reading below 50 since January, and this information is confidential until September 30. On the other hand, as we all know, light vehicle sales have been strong. Our contacts expect September sales of about 17 million, and they are now predicting that sales in 2002 will be within striking distance of last year's very high levels. The industry seems quite willing to respond to any slowing in demand with even higher sales incentives.

In the District's other manufacturing industries, conditions vary widely. We've heard positive reports from manufacturers supplying homebuilders. And the pickup in the demand for paper packaging materials that I mentioned last time has continued. But producers of heavy construction equipment and Class A trucks remain gloomy, and the drought is a negative for farm equipment, at least in the short run. Capital spending, of course, continues to be a big question mark. One reading came from the international manufacturing and technology show that was held in Chicago this month, which is the big trade show for manufacturing equipment. Attendees generally indicated that sales in their industry are still quite poor but are no longer getting any worse. Our Advisory Council on Agriculture, Labor, and Small Business met two weeks ago, and representatives indicated that while many laid-off workers are being recalled, most employers remain reluctant to hire new permanent workers given the still somewhat cloudy future. Perhaps for this reason, both our Manpower and our Kelly Services contacts reported that

national demand for temporary workers has been rising rapidly since August. That is good news. It is the first time during this recovery that both were so positive. Moreover, the pickup was not limited to manufacturing, but orders were strong across the board.

Our contacts report that wage pressures are minimal. However, businesses are struggling with higher health care and other insurance costs. Manufacturers say that the steel tariffs have raised prices, increased delivery times, and reduced the quality of the steel that they buy. Moreover, we had a fascinating exchange at our recent advisory council meeting between the steel workers' union leader and one of the country's leading duck farmers. The issue was how retaliation to the steel tariffs by some of our trading partners is hurting other subsidized industries. [Laughter]

CHAIRMAN GREENSPAN. What a "fowl" thought!

MR. MOSKOW. Well, I haven't had so much fun since I was deputy trade representative! Turning to the national outlook, the economy still seems to be on a bumpy road. We have absorbed an extraordinary number of shocks over the past year: September 11, the war on terrorism, international trade disputes, the failures in corporate governance, and now the prospect of war with Iraq. To date the economy has shown a good deal of resiliency, but these shocks have taken a toll on confidence and have substantially raised uncertainty, as David mentioned.

Continued sluggish job growth is a concern. Employment growth is looking more and more as it did following the 1990-91 recession. Of course, the unemployment rate was much higher then, and overall labor markets are in better shape now. Looking forward, I am encouraged by the reports of solid demand that I'm hearing, as I mentioned, from the temporary help industry. And people continue to buy homes and spend on big-ticket items. Low interest

rates clearly have helped, but this activity also indicates households' confidence, at least for now, in their long-term employment and income prospects. In my view this revealed preference is probably a better gauge of consumer confidence than the survey-based measures that have been weak recently.

So why aren't businesses showing some more confidence? I wish I knew for sure. Given the continued strong fundamental pace of technological change, current capital spending probably is not being held back by further deterioration in perceptions of the ultimate return to investment. More likely we're seeing some delays in capital spending because firms at this time are reluctant to make large, often irreversible commitments in this environment of elevated uncertainty.

But balancing these various factors, we think the most likely scenario continues to be one of moderate economic expansion with low inflation. Nevertheless, given the sluggish job growth and skittish business sentiment, I am concerned that the economy doesn't have a lot of room to absorb new shocks or any intensification of the old ones. Consequently, the risks remain weighted toward economic weakness.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Thank you, Mr. Chairman. The Twelfth District's economic recovery has been proceeding at a moderate pace, with perhaps a slight weakening this summer. Technology companies in the West continue to struggle with rapidly falling prices and weak earnings. Recent news from the sector indicates job reductions rather than expansions. In California the pace of job losses among tech manufacturers slowed earlier this year but then picked up again in July and August. And a recent drop in average hours worked in these sectors

confirms the weakening of labor demand. An exception in the District's tech sector is Microsoft, which recently announced plans to add 5,000 people to its workforce by mid-2003.

More generally, total employment has been flat to down slightly in most parts of the District in recent months. In California the unemployment rate actually fell in the last two months, but this masks a drop in civilian employment that was, of course, more than offset by an even larger drop in the number of job seekers. Some of the state's job seekers may be discouraged by rising long-term unemployment, which is a bit higher than in the rest of the nation. California also is struggling with a large state budget gap induced by a drop in revenues that was due largely to extensive exposure of the state's tax base to stock market fluctuations. Recently enacted spending cuts and tax increases equal nearly 1 percent of the value of total output in the state. And other budget-balancing measures shift the adjustment burden forward, creating a likely drag on future economic growth.

There is some positive news, however. Throughout the District, household spending on consumer durables and home purchases has been robust. After surging in the first quarter, home sales have come down a bit but remain at high levels. And home prices have continued their upward march to levels that are somewhat high relative to rental rates. However, the adjustment necessary to bring prices back in line is not exceptionally large in most markets. Seattle and San Diego are notable exceptions where home prices are significantly high relative to rental rates.

The southern California economy has been the District's most reliable source of expansion this year, and it will soon receive an additional boost from several large Pentagon contracts. One of these will keep Boeing's 7,000 worker facility in Long Beach open for years to come. In Seattle, Boeing's commercial aircraft division avoided a major strike on September 13, when its largest union of 25,000 machinists voted to accept the contract offer.

This improves the company's immediate outlook, but it still faces significant challenges. The strike was averted in part because soft demand strengthened Boeing's bargaining position by reducing potential strike costs. And the underlying labor discontent may be a problem when Boeing's second largest union comes to the bargaining table on October 29. Labor unrest also remains an issue at West Coast ports. But despite the long, bumpy negotiations and a few limited work slowdowns in the past couple of weeks, the likelihood of a protracted slowdown or stoppage remains low.

For the national economy, our forecast for the near term and for the next year has changed very little since the August meeting. Recent economic news has provided very mixed signals, with spending indicators largely on the strong side while labor market indicators and industrial output have been weak. At the same time, financial markets have been volatile but have not changed enough on balance to alter our outlook significantly.

We continue to be on the optimistic side of the Greenbook with a forecast of $3\frac{3}{4}$ percent and 3 percent growth in the current and fourth quarters of this year and 4 percent next year. An alternative simulation in the Greenbook implies that one reason for this difference may be the assumptions about the growth of structural productivity and potential output. We incorporate a smooth path for structural productivity growth of just around $2\frac{1}{2}$ percent for 2001 through 2003. This is well above the path in the Greenbook, which tends to vary more with the business cycle. Last year the Committee discussed the pros and cons of these alternative approaches in its first special topic session, and I won't get into that here. However, I do want to point out that this issue has significant implications for the outlook at the present time.

With regard to inflation, our forecast shows moderate increases of a bit over $1\frac{1}{4}$ percent in the core PCE price index in the latter half of this year and also next year. Having expressed a

fairly sanguine view of the future, I have to admit to being a bit uneasy about prospects for the economy. The reason is that most of the risks seem to be skewed to the downside: another terrorist attack, war with Iraq, declines in house or equity values, and fragile business confidence. Based on our outlook and risk assessment, at this point I would see no reason to change the current stance of policy. Thank you.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you, Mr. Chairman. After listening to all kinds of people over the summer, I've come to the conclusion that perhaps I should always listen to equal numbers of manufacturers and retirees because manufacturers always want lower rates and retirees always want higher rates. Or maybe better yet, I should just save myself some time and not listen to either group!

Most reports from our directors indicate that not much has changed recently. That's similar to what Mike Moskow was saying about his District only I didn't sense that the tone among our directors was quite as negative as I thought Mike was suggesting for his. To me, neither reports of strength nor reports of weakness tended to dominate. But let me note just a few things I heard from directors. A fresh report on the coal industry in the region indicates a stronger demand than had been anticipated earlier, which is due primarily to higher coal consumption by power plants; that business has been very good. The strength I mentioned in the spring in business at roadside hotel chains and family style restaurants continued through the summer, as did the weakness in urban center hotel chains. Employment of unionized truck drivers was reported to have continued to increase in spite of the bankruptcy of Consolidated Freight Company. And sales at the annual September auction of thoroughbreds in Kentucky were even worse than the July auction of colts. We were told that dollar sales were down

40 percent, and it was primarily because Middle East buyers didn't show up this time. At a recent meeting of our Community Bank Advisory Council, several members described their business customers as being highly liquid. These customers had lines of credit in place, and they had attractive investment opportunities. They simply lacked the confidence to proceed. As one banker put it, "Small businesses are healthy but afraid."

On the national economy, I want to comment about some cyclical versus secular trends. A former member of our Small Business Advisory Council who runs a metal fabrication company near Lexington, Kentucky, attended a joint board of directors dinner where Governor Olson spoke on September 11. Actually we were in Covington, Kentucky, so there were a lot of references to what it was like over half a century ago when the Chairman played with a band there. In fact, it was pretty exciting.

CHAIRMAN GREENSPAN. I don't know if I should admit to this, but in the back room there were very peculiar things going on. [Laughter]

MR. JORDAN. So we heard! As for his view on the economy, this small businessman described it as "saw-toothed with a positive bias." That's just the way they talk in Kentucky, I think. The saw teeth are obvious in the month-to-month changes that are regularly reported. But ascertaining whether or not there is a positive cyclical trend has become especially difficult for two reasons. One reason is that we're now in a period where year-over-year comparisons are worse than useless. They are highly misleading. For example, people in this room know that, if I were to say that during the most recent reserve settlement period ending on September 18 there was a 47 percent drop in nonborrowed reserves from a year earlier, all of you would know that that is useless information. Of course there was, and we know why. But comparing a period with the same period a year earlier is the way a lot of data such as retail sales, corporate earnings,

and so forth are reported. That is not going to tell us anything, and it may mislead a lot of people. For example, when we get the October car sales figures, the headline number is going to be reported as the biggest monthly drop in the history of the series. That's pretty useless information.

Secular trends also are hard for people to filter out. When the August employment figures were released, our directors concluded that the continued weakness in manufacturing employment suggested that the expansion was not on firm ground. But manufacturing employment was weak throughout most of the ten-year long expansion of the 1990s. At the end of that expansion, 24 million more people were working than at the end of the prior expansion, but manufacturing employment was down 370,000 on balance over the ten-year period. And even if one assigns a significant share of the help supply employment to manufacturing, it was still a weak performance. Breaking it down, durable goods employment was reported to have risen 300,000 over the ten years while nondurable goods manufacturing fell by 670,000 over a decade of economic boom. And that's probably an understatement. The chairman of our board also sits on the board of Hamilton Beach, which I assume still has an SIC code of a small manufacturer of appliances. But Hamilton Beach has not made any investment in any facility that manufactures anything in over a decade. All the items that are sitting on the shelves of Wal-Mart with a Hamilton Beach label on them are bought from contract manufacturers someplace in the world.

The point is that there are powerful secular trends stemming from this continuous globalization of the economy that are altering the profile of our national economy. They were doing so before the cyclical contraction, and they will continue to do so during an economic upturn. In fact, these forces are just as likely to strengthen as to abate during a cyclical upturn.

We will have to look elsewhere for confirmation of any kind of positive bias to the pattern of the saw teeth.

Finally, regarding Dave Stockton's opening comments: If a year ago at this time Dave had not only anticipated the subsequent shocks but then went on to forecast accurately what actually has happened over these past twelve months, I suspect it would have seemed simply not credible, even given our post-September 11 policy actions. The point is that the U.S. economy over these past twelve months has performed much, much better than anyone had any reasonable right to expect, which is a testament to the inherent resiliency of a market economy. And that's very important to keep in mind. Thank you.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Thank you, Mr. Chairman. Economic activity in the Southeast has continued to advance at a lackluster pace since our last meeting. And it's my sense from conversations with business community leaders that we have lost some of the momentum and cautious optimism that we were seeing earlier in the year. Consumer spending is showing the same pattern that it has at the national level. Home sales and residential construction remain strong in most of our markets, yet there are continuing reports, especially from the chairman of my board, of growing softness in higher-priced homes. Also like the nation, auto sales remain very strong, given the reinstatement of incentives. Retail sales of nondurable goods rose only modestly across the region in August, and back-to-school sales were reported to have been soft and disappointing.

State budgets are feeling the pinch of tax receipts that are running below forecasts. Leisure travel to resort areas in the District has improved slowly, supported primarily by driving travelers. But business travel and related convention business, which is important to many of our

major cities, has been weak and continues to disappoint. Business spending remains subdued. With the exception of our growing and vigorous southern auto industry, manufacturing appears to have lost some momentum as well. Almost any postponable expenditure is still being deferred, and businesses are not adding significantly to payrolls. The large international temporary employment company headquartered in Atlanta tells us that the growth in temporary employment demand that was showing some pickup in the spring and early summer has plateaued. And there has not yet been any significant sign of employers wanting to convert temps to permanent hires, a clearly identifiable stage in an employment rebound which that company says was evident in past recoveries.

Probably the weakest sector in our Southeast region is commercial real estate. That market is essentially dead in the water, and large contractors who do the bulk of this work report that there are not even any early conversations with businesses about new projects. Inquiries further back in the construction food chain—to architects in our area—brought the same reports. Even new public projects funded by state and local governments seem to be drying up as current work is completed, reflecting the growing pressures on state and local budgets.

Consumer lending continues to outpace commercial loan demand. While we're hearing mixed reports on consumer bankruptcies and defaults, data being shared with us by the large credit reporting company, Equifax, suggest that debt service burdens have come down over the past year, especially for those in the highest income class. Consistent with this observation, our bank examiners report that consumer credit quality at District banks is either holding or improving, with no significant surprises. Somewhat contradictory to that information, we've received several recent reports, including some from participants at our Small Business Advisory Council meeting last week, of slower payments on accounts. While some of that deterioration

appears to be at the consumer level, most reports seem related to trade credit where companies, especially large companies, are stretching out their payments.

At the national level, we interpret the new data since our last meeting as decidedly mixed, not offering any new encouragement of growing momentum over the near term but perhaps suggesting that the downside risks that we were concerned about six weeks ago have abated at least somewhat. At the same time I judge uncertainty to have increased, and the consequences of a possible war with Iraq have certainly contributed to that. As solid recovery gets pushed further out in time, many are expressing growing frustration and impatience. With few signs of significant increases in capital spending and employment over the near term, my own view is that the path of the economy over the next several quarters may well be a bit below that traced out in the Greenbook. The more I learn about the extraordinary capacity yet to be worked out of the telecom industry—and the now more apparent structural problems in the airline industry that go well beyond the September 11 effect, the even longer delayed rebound in commercial construction, and other various excesses and imbalances that are being worked through—the harder it is for me to expect a big, near-term upside surprise.

Having said that, I still urge us to be patient while those corrections get made. As I've suggested before, further cuts in rates could only delay those changes and slow the ultimate recovery. In fact, it seems to me that the very low, below long-term equilibrium, interest rates that have been in effect for a long while now may have contributed to the development of some of the excesses. Moreover, the low rates may already be slowing the adjustment process and could be helping to create still new imbalances. A number of observers of the massive overcapacity in the telecom sector trace some of those excesses to the ready availability of low-cost capital that encouraged even fringe and upstart telecom suppliers and service providers to

invest well beyond any sustainable level of capacity. My commercial real estate friends tell me that the commercial real estate oversupply is adjusting less rapidly than would be the case if carrying costs on marginal properties were not so low. And the now historically low borrowing rates on homes and autos may be encouraging various players in those sectors to develop unrealistic expectations about a sustainable level of activity.

Although I would not yet characterize price developments in housing as a general housing bubble, I'm hearing more and more reports of what might be characterized as purely speculative housing and property deals, mostly in Florida. These deals are all driven by claims that sound as if the property can be resold in a few months or a few years at a nice profit so at current interest rates how can one pass up such an opportunity. Of course, there's a bit of a Catch-22 in that these slow adjustments induced by low interest rates have served to sustain some measure of stability as the economy works through other adjustments. While I'm certainly not suggesting that we consider any policy tightening at this meeting, I do think we may already be in a bit of a policy trap. I recognize that some downside risks remain, including some potentially large and negative shocks, but I do not think we should exacerbate our long-term problem with still lower interest rates unless the downside risks loom larger or the negative shocks are realized. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. Thank you, Mr. Chairman. At our last meeting in August, I reported that the recovery in the Third District appeared to be slowing from the pace seen earlier in the year. Incoming data reinforce this assessment. Although auto sales in the region remain robust, retail sales of general merchandise slipped from July to August. Some merchants remarked that the long spell of hot weather damped sales of fall merchandise, especially apparel.

Retailers tell us that their outlook for sales over the balance of the year is uncertain, so they're being cautious about their inventory plans. Consumer spending on tourism and related activity has been below last year's level in each of our three states. While day-trip numbers this summer were higher than last year, overnight stays and spending per visitor were down, resulting in less business at most vacation areas. Residential real estate activity also appears to be moderating but from relatively high levels. Housing permit issuance has moved up this year, but builders contacted in August said their new homes sales had slowed a bit. Residential real estate agents reported that sales of existing homes also slowed in July and August but that the rate of sales remained high by historical standards and price appreciation continued at a rapid rate.

Commercial real estate markets have remained soft. Although there has been only a small increase in the metropolitan Philadelphia area vacancy rate from the first to the second quarter, rent concessions have become more common and more generous. The value of nonresidential construction contracts awarded in the region has fallen since spring when the total was boosted by contracts for casinos, offices, and educational buildings. Our contacts in commercial real estate say they expect some improvement but probably not until next year. Loan volumes in Third District banks have been flat to down in recent weeks, as strong growth in residential real estate loans has been offset by declines in business lending.

Labor markets in the District have stabilized. After declining in the first and second quarters, employment in our three states was flat in the first two months of the third quarter. The tri-state unemployment rate remains below that of the nation—averaging 5.3 percent in the first two months of the third quarter, down from 5.5 percent in the second quarter.

Activity in the region's manufacturing sector paused this summer. In August our business outlook survey index of general activity dipped into negative territory for the first time

since last December. The index strengthened slightly in September, returning to positive territory with a reading of plus 2.3, a level that is consistent with not much change in regional manufacturing activity this month. Our index has a reasonably good track record in predicting national industrial activity, so the modest rebound suggests that recent declines in manufacturing activity in the District and perhaps in the nation may have abated.

In September the indexes on new orders and shipments also moved back into positive territory. We also saw some improvement in capital spending plans over the next six months. This index rose from about 5 percent in August to about 13½ percent in September, which is somewhat closer to the range of readings normally recorded in expansionary periods. As a summary measure, our indexes of current economic activity are indicating slight, positive growth in the three states.

Third District conditions appear similar to those in the rest of the nation. In my assessment, the economic recovery continues at the national level but at a slower pace than earlier in the year. The real issue is that the recovery has yet to develop any kind of traction to help it build momentum. It is looking very much like the so-called jobless recovery of 1991-92. Indeed, in terms of job growth, this recovery has gotten off to the second slowest start in any postwar recovery. This partly reflects the fact that the services sector has become a much larger portion of total payroll employment, and job growth in that industry is normally weak in the early stages of a recovery. But in both 1991 and 2002 the recovery in service employment has been even weaker than average. In 1991 the financial headwinds included job losses in finance. This time the shock of September 11 and the collapse of the tech bubble have adversely affected the broad services sector, including airlines and travel, telecom, and IT, as well as the financial sector.

Two other similarities to 1991 are the sharp decline in business and consumer sentiment—although not to the level of 1991—and the concern that the recovery may be stalling. You may recall that by December 1991 the Greenbook had forecast two slightly negative quarters based upon a very negative November employment report, which was later revised. Today, we face the lingering effects of September 11 on the national psyche, the aftermath of the bursting tech bubble, the negative reaction and added uncertainty centering around corporate accounting scandals, and increasing anxiety over the possibility of war with Iraq. These are just some of the headwinds that our economy must fight through. Nonetheless, there are offsets to the headwinds, not the least of which are accommodative monetary and fiscal policies. Low interest rates are sustaining consumer spending on housing and durables, which is an essential part of the outlook. And some categories of investment spending are beginning to post increases. Overall economic growth this year is expected to average around 3 percent, although the risks remain, as many have noted, weighted toward the downside.

The question today is whether more stimulus is needed now or whether patience is a virtue. My preference is to give the current accommodative policy more time to work. I don't want to rule out a rate cut in the future, but in my opinion at this point we don't have sufficient evidence for one. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Thank you, Mr. Chairman. I would describe the Second District as limping along. The regional economy is growing slowly, with very little job growth and essentially no price or wage pressures. Business sentiment is split. Wall Street, at least as reflected by the Bank's board of directors, is extremely pessimistic and risk averse.

Main Street, as represented by our Branch board in Buffalo, is cautiously optimistic. And our forecast for the national economy is about where the Greenbook is.

The chasm between the United States and our traditional allies is in my view greater than it has been at any time since World War II. Our economy is operating below capacity and below trend. Europe is barely growing at all, and the future of its most important economy now depends on the whims of the Greens and of the trade unions. Japan is Japan. The emerging-market situation is full of growing problems, with Brazil too close to call. My usually reliable, at least to me, stomach lining is telling me that a major storm is brewing, but when or even if it will hit is difficult to tell.

I believe that the third quarter is sufficiently strong and that too many Fed officials have had too much to say recently, so the market would be overly surprised if we were to act today. And we could create some real confusion at the weekend meeting of the World Bank and International Monetary Fund, which is likely to be confused enough anyway. We must, however, make sure that we do not paralyze ourselves into inaction or expect some event to make a policy move an easy and obvious call. If the malaise here and abroad continues, it just becomes too dangerous for us to stand by and pray that American consumer confidence will hold up the world economy. Rather, activity and prices could slowly but steadily sink and put us into a very, very difficult policy trap. I believe that it is not yet certain but increasingly likely that we will have to ease policy and do so robustly either at or between meetings. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you very much, Mr. Chairman. New England's recovery appears to have stalled out. Employment continues to decline. Joblessness reached a high for

the year, and hiring surveys indicate that most employers are not planning to add jobs. And forward-looking indicators embodied in consumer and business confidence surveys are not improving. However, these regional data tend to be driven by conditions in Massachusetts and more specifically by the information technology industry broadly speaking. Elsewhere the picture is not great, but it is not quite as bleak as it is in the Bay State.

As compared with the nation as a whole—where there has been some recent job growth, albeit small on a month-to-month basis—New England's month-to-month pattern reflects job losses at an increasing pace. This pattern is driven by Massachusetts, which lost jobs steadily this year and last. Total employment for the state now stands better than 2½ percent below its pre-recession peak. Reflecting this, unemployment in Massachusetts rose to over 5 percent in July while in the rest of the states in the region it remained between ½ and 1 percentage point lower.

That Massachusetts is hardest hit by the recession and slow recovery that is grounded in a fallout in information technology spending is hardly a surprise, given the significance of that industry for the state as a whole. What is of concern is that there seem to be very few lights at the end of the technology tunnel, at least according to local contacts. Overall postings for technology jobs in the region continue downward. Only 4,500 such jobs were listed on Monster.com at the end of June versus nearly 26,000 a year ago. Hardest hit skilled areas were hardware technicians, Internet or e-commerce specialists, and telecom workers. A survey of tech executives concludes that overall confidence in expected growth in the sector fell from the first quarter to the second quarter, despite the headline GDP growth in information technology during Q2. In this survey, software executives were least confident, followed by telecom and Internet executives, but confidence among those in bio and med-tech industries did show greater strength.

Finally, a leading index for Massachusetts suggested that economic activity in the state was likely to move sideways at best in the next six months or so, reflecting the fact that a widespread recovery in technology has not yet begun.

Moving away from technology, however, there may be signs that growth has not stalled completely. Job growth in services, retail, finance and insurance, government, and construction is holding its own. Manufactured exports staged a modest turnaround in Q2 after a drop in Q1 of some size. And residential real estate markets remain vibrant, with perhaps some softening in the upper-end price range.

Commercial real estate markets remain deeply in contraction, with vacancy rates in Boston proper and its suburbs stabilized at high levels. Demand is said to be virtually zero, and we have negative absorption rates. Rents have come down substantially from their levels of 2000, which were quite high, and are poised to fall further as leases expire on unused space. Even here, however, contacts report that a strong market exists for purchasing office and apartment buildings, albeit at a healthy discount. This market is spurred by low interest rates, volatile equity markets, and it is said, confidence in the longer-term fundamentals of the area. That is, there's confidence that the space market will recover in time to provide some return on these investments.

We held a meeting of our regional Small Business Advisory Council last week and its members, too, provided some reason to believe that all is not quite as bad as the Massachusetts-dominated regional data might suggest. While they were not as confident as they had been earlier in the year, they did suggest that across a wide range of manufacturing and service businesses there was moderate underlying strength. Unlike the small-business people in Jerry Jordan's District, they did not seem afraid. In fact, they reported that they were being courted to

a greater degree by regional banks and were being offered loan terms that they hadn't seen in recent years. All the members of the council continue to be highly focused on cost control and have benefited from greater labor availability. One lumber supplier reported concern about whether housing construction could continue to grow but also noted plenty of work going on in building schools, bridges, and housing for the elderly, despite the very sharp cutbacks in state spending that all of the New England states are undergoing.

Saw mills are experiencing increased profits in part because there's less of a supply of forest products in the market owing to a drop in imports from Canada as a result of increased tariffs. A vegetable and flower wholesaler and retailer reported record sales over the Jewish holidays, and a fabric manufacturer is having his best year ever. And a bit against the tide of bad news in the technology sector, the director of a local software council reported member companies seeing activity in the pipeline—not yet realized in sales, but in the pipeline—that is stronger than a year ago.

Turning to the nation, I've been struck by what seem to me to be two marked changes in incoming data and sentiment since our last meeting. At that meeting I was concerned about the impact that negative financial conditions were having on the prospects for a continued recovery. And I was concerned about whether or not monetary policy was accommodative enough to act as a balance to those headwinds. These financial market conditions seemed to ease a bit after August 14. Incoming data on durable goods orders and shipments, retail sales—especially for autos but in other areas as well—home sales and permits as well as the perhaps fluky drop in unemployment seemed to point to firmer prospects for growth. Then as geopolitical fears grew, even after an uneventful day of remembrance on September 11, market volatility increased with new rounds of investigations of corporate wrongdoing. Incoming data on unemployment claims,

purchasing managers' sentiment, industrial production, and an expected drop in motor vehicle sales seemed to signal that growth prospects had dimmed more than a bit.

All of us who have been speaking during this intermeeting period have commented on the bumps in the road to recovery. Currently those bumps seem particularly large, at least to me. Reflecting these shifting sands, our forecast, assuming an unchanged federal funds rate, has weakened a bit for the last quarter of this year and for 2003. We now see Q4-over-Q4 growth in 2002 at 2.8 percent and at 3 percent in 2003. This is a bit below our estimate of potential in both years, so we see unemployment moving up to 6.2 percent by the end of 2003 and inflation moving down.

These headline numbers don't differ a lot from the projections in the Greenbook, but frankly I find both of these forecasts a bit worrisome. They suggest that three years of below-potential growth, no progress in reducing unemployment, and falling inflation represent an outcome with which we might be comfortable enough to leave policy unchanged. Moreover, all of these forecasts reflect, at least in my view, the best case. Downside risks predominate, and people have talked about them. Just to name a few: Will consumers stay the course on spending if job growth doesn't accelerate? Will technology spending turn the corner any time soon, given slow to moderate growth here and abroad and plenty of excess capacity? And I have to say that the increasing risk of a war with Iraq and continuing turmoil around issues having to do with corporate governance suggest that equity market risks abound.

It is true that policy may be poised to address at least some of these risks. Low interest rates buoy the consumer as do tax cuts. Changes in tax incentives may help boost lackluster business spending at some point. But unless good reasons to invest emerge, it is hard to believe

that tax incentives, or for that matter lower interest rates, will drive spending all by themselves. Productivity growth remains strong, though that has exacerbated the joblessness of this recovery.

The economy may in fact heal itself, as the Greenbook suggests, without further policy stimulus. But I think there is at least some reason to believe that that won't happen any time soon. Now, it's possible that lower interest rates now could have unforeseen consequences—not just in terms of inflationary growth over the longer term but in the nature of the bets being taken in financial markets and perhaps in real estate markets as well—along the lines referred to by President Guynn. And it is also true that if a war on Iraq or some other as yet unrevealed corporate malfeasance produces some untoward economic response, we will need a bit of ammunition to work with. These may well be reasons to hold off. But in my view the policy choice isn't easy. My personal preference would be for policy that encourages stronger growth in this environment of even lower projected inflation, though I would agree that such a stance is not without its own risks.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Thank you, Mr. Chairman. The first sentence of the Beige Book summary says that economic activity has slowed in most Districts but with considerable variation across sectors of the economy. That describes my District very well. On the weak side, just to give you a bit of the detail, manufacturing activity has clearly softened appreciably lately. That includes the furniture industry, a fact that is a bit disappointing because one might think it would be stimulated to some extent by the continued strength in new home construction and sales. I spoke to the CEO of one of the larger North Carolina furniture companies, and his theory is that younger families are stretching so hard to pay the elevated prices for new homes that once they move in they have to sleep on the floor! [Laughter] The other really weak sector

in the District is agriculture. Of course, we're not the nation's breadbasket, but like you folks in the Kansas City District and elsewhere in the midsection of the country, Tom, our farmers are suffering mightily from the severe drought we've had on the East Coast. Those are the comments I would make regarding the weak side.

On the brighter side, as I suggested earlier, housing activity is still quite robust across our region. Ditto for new car sales. It seems as if all the Reserve Banks met with their small business councils in the last couple of weeks, and we did too. I had at least one favorable report out of that meeting. One of our members reported that a power tool company that had earlier moved a plant from South Carolina to Mexico recently had moved it back to South Carolina. My council members speculated that this was because most of the Mexican workforce has now moved to the United States and a lot of them are living in South Carolina. [Laughter] Seriously, with respect to the sectors that are perhaps most problematic for the national outlook, despite the weakness in manufacturing we do hear some reports of a gradual pickup in capital spending. But my sense is that most of this involves equipment replacement, driven by the shorter useful lives of much of today's equipment and the tax incentives that were introduced earlier in the year. It doesn't seem to us to reflect any significant, increased optimism among business people about the near-term and intermediate-term outlook. And finally on the District, our labor markets remain generally soft pretty much across the region. So we see a mixed picture in our region overall, leaning on balance to the weak side for the moment.

With respect to the national outlook, personally I am reasonably comfortable with the Greenbook forecast. I believe it's plausible and, frankly, while it's not a roaring forecast, under the circumstances I think it would not be a bad outcome if it materialized. But as I said earlier when I asked that question of David, as always there are risks in the projections on both the

upside and the downside. Of course, most of the focus currently is on the downside risks, and I'll come back to that. I would say, though, just to cover the full range of possibilities, that I think—and I guess I differ with Jack Guynn a little on this—there is still some potential for an upside surprise given what in my view is an accommodative current policy stance. Of course, that is recognized in a couple of the alternative scenarios you put out, David. And a number of Jerry Jordan's comments resonate with me. I think there's an upside possibility.

What seems to be damping the recovery now is a quite pervasive caution in the business sector. Firms are reluctant to make commitments for fear that a sustained expansion is not going to take hold and because of the uncertainty regarding Iraq. But if growth picks up as the Greenbook projects, this caution and the headwinds it creates could dissipate. The point I would make here is that it could dissipate fairly quickly at some point in a manner similar to what occurred in the latter part of 1993 and early 1994. In that event we would need to react promptly and preemptively as we did in 1994. I believe we would do that. So unlike my concerns in the past, I think we're pretty well covered on the upside at least for now.

Again though, as several people have pointed out, most of the focus now does seem to be on the downside risks. That certainly seems to be the sense of the majority of comments around the table this morning, and it was the sense at our last meeting when we moved to the tilt toward weakness in our statement. Broadly, my view is that our current stance, which again I think is quite accommodative, is sufficient to handle what I would term garden variety downside risks, like persistent longer-than-expected business caution, somewhat weaker-than-anticipated consumer spending, or perhaps a moderate deceleration in housing activity. What worries me—and this will really make you comfortable, Jerry—is a very serious downside scenario featuring a

sharp further drop in household and business confidence and spending and a credible threat of deflation that will bring us face to face with the zero bound.

Let me just add a quick footnote on that. We discussed this issue at length in our special topics session in January. I thought it was a very good and complete discussion. I didn't have the sense, though, that we reached much, if any, consensus regarding how we would respond in practice, operationally, if such a situation emerged. It appears to me that currently the Federal Reserve is quite appropriately doing extensive contingency planning with respect to a number of our operations around the System. Ironically, I'm not at all sure that this Committee is fully prepared to deal with a zero bound contingency if we're suddenly confronted by it. And that strikes me as a fairly glaring omission in the System's overall current contingency planning. I don't know exactly the best way to tackle this problem, but in general it seems to me that we should perhaps consider bringing together the right people to review the options we have if a situation like this arises. I think we laid those options out pretty well in the discussion in January. I would like to see us determine what the most credible options would be and then have that group help us think a bit about how we would implement some of these options if we were suddenly in a position to have to do that. Thank you.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. I'll be brief because in my view very little has changed on balance since our discussion at the last meeting. As far as the District economy is concerned, perhaps one way to characterize it is to distinguish between the consumer and business sectors. The consumer sector continues pretty much as we have been discussing around the table for a good number of months now. Spending at retail has been strong—autos, of

course, have done very well—and tourism activity has been good. Housing continues to do well, and home improvement spending is another notable bright spot.

The agricultural sector has picked up in many parts of the District where the drought has been alleviated. Problems still persist in a few places, but geographically the drought area has diminished, so in fact agriculture is doing a little better. And based on anecdotal reports, it appears that the labor market is showing a few more signs of activity across a broader range of job opportunities, so that's a plus. On the other hand, in manufacturing and related businesses, activity is pretty quiet, as it has been for some time. Little has changed there.

As far as the nation is concerned, I guess it's repetitious to say, but I think an economy with modest growth and low inflation is the most likely outcome and an acceptable one. We ran the incoming monthly and quarterly data through our VAR forecasting model, and it produced basically the same forecast for this meeting that it did for the previous meeting. I take that to mean that the model didn't interpret the incoming data as providing any large surprises or that any surprises were offsetting. My point is that the outlook doesn't seem to have changed very much based on what has happened over the intermeeting period.

I do continue to think that a significant and broadly based expansion in business spending is probably still some time off. There has been some discussion, of course, of the jobless recovery, and that is not a preferable outcome. However, if we look back at 1990-91, as I recall—depending on exactly how one interprets the data—it took a year and maybe as much as two years before we saw some really significant and sustained increases in employment. Nevertheless, that expansion turned out to be a very long lived and healthy one. One observation, of course, doesn't make a trend, so I don't think we ought to draw too many conclusions from that except to say that we may be well served by some continued patience.

CHAIRMAN GREENSPAN. There's coffee outside. Why don't we break for fifteen minutes?

[Coffee break]

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Growth in the Eleventh District's economy seems to have stalled since the August FOMC meeting. A sense of drift comes through from our Beige Book contacts, our recent board and advisory council meetings, and many of the latest available statistics. In terms of employment, Texas showed signs of recovery in the first quarter but has been slipping since then. This would suggest a double-dip recession. But if we use broader measures of economic activity, Texas has yet to emerge from the recession. Either way, the District economy seems to be lagging the nation so far this year, in part because we have a larger concentration of industries that declined during the recession. These include transportation, which is still suffering from the effects of September 11; high-tech, which in our region is still suffering from the telecom bust; energy, which is still feeling the effects of last year's drop in oil and gas prices; and Mexico, which is only beginning to overcome the impact of the U.S. manufacturing recession. Mexico's special burden is that it is linked to the United States at the point of our worst performing sector, the manufacturing area.

Overall conditions in the high-tech industry remain bleak, and high-tech employment continues to decline. As one of our directors put it about ten days ago, the outlook is "softer rather than firmer." Activity is not expected to improve in the next six months, and industry observers don't expect a recovery in the telecom sector to come until after 2003. If there is an island of strength, it's the wireless industry.

Going forward, downside risks seem to predominate over any upside potential. First, overcapacity continues to discourage investment in new equipment. Relatively new equipment available through bankruptcies is being sold at fire sale prices, undermining the sale of new equipment. Second, purchasing managers remain cautious about investment, and budgets for spending on new technology are constrained. This phenomenon has given rise to longer replacement cycles and purchases in smaller increments. Finally, venture capital funding to Texas firms is down 73 percent from year-ago levels, although that may be one of Jerry's misleading statistics. If there is any light at the end of the high-tech tunnel, it's coming from small and medium-sized firms that can now afford to absorb some of the workers laid off by larger companies—people they could not compete for during the boom in stock options and salaries. This confirms what our directors and members of our small business advisory council have been saying about declining compensation in high-tech industries.

Another area of concern in our District is commercial real estate. Office vacancy rates are running around 25 percent in Austin, up from only 8 percent in the first quarter of last year. In Dallas, vacancy rates are running at 26 percent, up from 18 percent early last year. The vacancy rate is 16 percent in Houston but is expected to rise to the mid-20s within a year. Rent concessions on commercial properties have persisted for months, and our Beige Book contacts don't expect a turnaround any time soon. Residential markets had been holding up pretty well until a couple of weeks ago. Even the lower end of the housing market has begun to show a softer tone despite low mortgage rates.

The resumption of growth in the Mexican economy and preliminary signs of strengthening in the maquiladora industry are providing some encouragement to the Texas-Mexico border region. The latest export statistics show a sizable rebound in Texas exports to

Mexico, Canada, Europe, and Asia. However, the 15 percent decline in the Mexican peso since the beginning of August does not bode well for the future. The general consensus seems to be that the nation came out of recession at the end of 2001. It is difficult to come to the same conclusion for the Eleventh District. Looking ahead, our own internal forecast is for Texas employment to decline slightly over the remainder of this year.

On the national economy, I find developments to be a bit, but only a bit, more encouraging than in the Dallas District. Signals of strength in autos and housing are routinely offset by stumbling and sluggishness elsewhere. And the deteriorating condition of the economies of most other countries gives me pause. Last month's tepid employment growth, half of which is accounted for by hiring by the Transportation Security Administration, underscores the continued weakness in the labor market.

As I read through the Greenbook I kept wanting to believe the staff forecast. I agree that expansionary monetary and fiscal policy together with reasonably strong productivity gains could offset the headwinds coming from the stock market, excess capacity, and the lack of business confidence, all of which are leading to a deferral of hiring and investment. But I get sweaty palms when I think about the downside risks. What if business investment doesn't continue to strengthen as expected? What happens to productivity growth if investment spending continues to decline and we get, for lack of a better term, "capital shallowing" instead of "capital deepening"? What if foreign growth continues to slow over the remainder of this year and next year instead of improving as projected in the forecast? What if deflation in durable goods and disinflation in the rest of the economy continue to gather momentum? Will we have to deal with deflation and a zero bound at the same time? And with overall inflation trending

down since we last lowered rates this past December, how much has the real federal funds rate moved up recently? Are we as accommodative as we think we are?

GDP deflation has moved from the low 2 percent area in the last two years to the low 1s this year and over the forecast period. Seven or eight years ago we used to joke that we were only one recession away from price stability. I think we're just about there. In the Beige Book reports we continue to find few signs of overall price or wage pressures. Normally I am not comforted by rising commodity and gold prices, but the strength in these indicators gives me some comfort now because they appear inconsistent with a deflation story.

Perhaps the mildness of the recovery together with its movement in fits and starts is due to the mildness of the recession. And maybe consumer and business confidence have been driven down by event risks that are now behind us and both will recover soon. As I weigh the downside risks against the upside potential, I'm moving toward support of a move to lower interest rates. The risks of setting off a new wave of inflationary pressures seem minimal right now. The main question to me is whether at current levels lower short-term interest rates would do any good.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Thank you, Mr. Chairman. I want to concentrate on anecdotal information that has some forward-looking element to it. I hear the same sorts of reports of a mixed situation and feelings of uneasiness that everybody else has mentioned. Just briefly, let me note with regard to the housing industry that we had a luncheon with real estate developers and builders and I did not detect, in that group anyway, any tone of excessive optimism or bubble if you will. I thought there was a substantial air of caution and an understanding that business was good but

it wouldn't necessarily always remain that way. So for what it's worth, that's my assessment of the mood in that industry. Maybe it just reflects Midwest conservatism; I don't know.

As you may have seen in recent press reports, Wal-Mart and other retailers have a somewhat downbeat forecast. Wal-Mart had sales growth of 4 percent, and my contact at the company pointed out that that was against year-ago figures that were depressed by the events of September 11. He also noted that about 1 percent of Wal-Mart's growth is estimated to be coming from K-Mart because of the latter's continuing difficulties as it operates in bankruptcy. Wal-Mart had been experiencing 6 to 7 percent growth, and they just don't have a clue as to what is causing this downshift. They track sales very, very closely. One thing I find interesting is that they do know there's a paycheck cycle. People tend to go shopping when the paycheck comes in, so sales generally rise at midmonth and at the end of the month. My Wal-Mart contact said that they interpret the recent more pronounced paycheck cycle as suggesting more liquidity constraints on the part of consumers. People can't afford to shop until the paycheck comes in. Inventory levels at Wal-Mart and other retailers continue to be in excellent shape. Looking ahead, Wal-Mart has not changed its orders for the holiday season, but Wal-Mart managers believe from talking with suppliers that several other large retailers have cut back their orders for the holiday period.

My contact at UPS reported a downward revision in their forecast for the air package express business. Their expectation for next year is that volume will be basically at year 2000 levels, so they're not expecting much growth there. They are anticipating having to lay off 200 to 250 pilots along with other aircraft crew, and they are reducing new aircraft orders for the next three years from ten to eight per year. My contact said that they would have reduced those orders by more but it was too expensive to get out of the option contracts they had entered into.

They are in the process of parking twenty aircraft soon by sending them off to the desert. These are old aircraft: ten 727s, eight DC8s, and two 747s. He expected that those planes would never fly again; UPS is taking them out of service because they just don't need the capacity any more. He also noted that customers want more discounts, so the pricing environment is pretty rigorous, and UPS is expecting downward trends next year in terms of the pricing situation. My contact at FedEx was a bit more optimistic. I think FedEx has developed some business through the United States Postal Service, which is working very much in their favor, and they are expecting a good fall season. For the peak fall season they anticipate that volume will be up 2 to 3 percent relative to last year. That would be the first genuine growth in two to three years according to my contact. A representative of J.B. Hunt Trucking Company told me that his firm has yet to see the usual fall pickup in business and that their customers are nervous. Volume is a bit stronger or a bit weaker, and there certainly is no upward thrust in it. So I'd say that the overall view from these scattered reports is that people see the economy as essentially flat to slightly up currently and they don't anticipate any change in that situation in the foreseeable future. Thank you.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. The Tenth District has remained pretty much in a holding pattern since our last meeting. It has maintained earlier gains but has shown no further improvement since early in the summer. Manufacturing activity was flat for the second month in a row in August, after improving most of the year until then. In our Bank's August manufacturing survey, production and new orders both remained slightly below year-ago levels, and firms are still cautiously optimistic about the outlook for six months from now. But that optimism is not translating into any increased hiring or new capital spending. Firms are holding back.

Our District's labor market remains generally slack, with firms having little difficulty finding well-qualified workers. Fortunately, the announcements of job cuts have slowed in August and so far in September. Consumer spending remains generally solid, though not quite as strong as earlier in the summer. Retail sales were unchanged or down only slightly in most of our areas. Tourism in Colorado has fallen off but remains fairly good in the rest of our region where it is important for income. Residential construction remains strong throughout the District. Home sales have also been solid, although inventories of unsold homes in the Denver area have risen and that has been a subject of some press articles recently. Energy activity in the District has edged down lately but still is fairly good. And price pressures, as you've heard is the case elsewhere, remain quite muted in our region.

Our farm economy is now in recession, due I think importantly to the widespread drought that we're experiencing and that I talked about briefly last time. Crop prices have rallied as crops have withered, but farm income will drop sharply this year. Higher crop prices have not offset reduced volume from crop losses in many areas of our region. In livestock, which is our primary agricultural income source, the producers are booking rather sizable losses. Now, the higher crop prices may mean reductions in government payments, but as you probably all are aware, there is now talk about a supplemental aid package for that industry.

Let me talk briefly about the national economy. The economic news, as has been pointed out by others, is mixed. Consumer and business spending have been fairly robust, while manufacturing output and employment have been generally weak. In addition to weighing the recent economic reports in this uncertain environment, I understand that part of our job is to judge how the current opposing forces on the economy will eventually play out and to decide what we should do about it. Currently tending to push the economy forward, as others have

mentioned, is the stance of monetary and fiscal policy. Low interest rates, especially for housing and autos, have led consumers to continue buying. Several factors, though, are holding the economy back. Business spending remains sluggish due to the overhang of the surge in investment that occurred in the late 1990s, as David pointed out. And for some sectors, investment spending is going to remain sluggish for quite some time.

Another factor that is keeping growth sluggish—and it's an important one from the comments I've heard here—involves, as President Santomero said, the headwinds of uncertainty. We don't know if or when an attack on Iraq might come. We have no better idea about the likelihood, the magnitude, or the nature of a future terrorist attack. We are feeling perhaps a little better about the corporate scandals, but we don't know where that stands. And in the face of this Knightian uncertainty, the natural business response has been and is to hunker down, to wait and see what develops, and to hold off on any major spending until we know more. Business individual after business individual has told me that story.

That said, it's interesting that in both the Greenbook and our own Bank's projections we still are anticipating GDP growth of 3 percent this quarter, 3½ percent next year, and 4 percent into 2004. That is pretty much what we expected last time. I can't help but wonder what the outlook would be if this heavy hand of uncertainty were lifted. Of course, I recognize that we're unable to predict these other potential events, and we have to be prepared to act if they continue to hold us down as they are now.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. I'm gradually changing my mind about the economic outlook. For most of the year that outlook has been moderate to weak. Monetary policy has been accommodative, and we have felt that this accommodative policy would be

sufficient to restore economic health. For most of the year the recovery has been sputtering, with some good data and some bad data. But we have persuaded ourselves that we are, in the end, on track for a complete recovery. Perhaps so, but the recovery date has been pushed further and further into the future. In the Greenbook, for example, even though the near-term spending data were a bit stronger than anticipated, the staff actually lowered the forecast slightly. The high spending for autos and housing was not enough to make up for the lingering and perhaps chronic weakness in nonresidential structures and communications equipment. The international economy is weakening—again not dramatically but steadily—in places such as Europe and Japan. On the anecdotal side there is plenty of negative evidence in the Beige Book and in other reports we've received from the Reserve Banks, including what almost every President has said today.

One implication of this mixed picture is that the Committee may have gotten lulled to sleep. We have been looking for the smoking gun of a double-dip recession. We haven't seen it, and we have contented ourselves with a moderately performing economy for a longer and longer time. Evidence in favor of this claim comes from an examination of successive Greenbook forecasts. In March the Greenbook baseline case was for a 2003 unemployment rate of 5.3 percent. It was raised to 5.4 percent in May, 5.5 percent in June, 5.7 percent in August, and now is over 6 percent in this month's Greenbook. The date of return to full employment has gone from 2003 in the March forecast until sometime in 2005 in the current Greenbook. We have been tolerating a longer and longer period of less than full employment. Of course, the fact that the forecast output gap has changed suggests that we can't forecast it perfectly. Indeed we can't. But how should we interpret this fact? We know that output is at less than full employment levels by most reasonable measures right now. Do we see anything on the horizon

that restores full employment in any reasonable period? The staff certainly doesn't, except in one of their simulation scenarios. Almost every speaker today didn't seem to see anything, and I don't either.

The evidence is less dramatic on the inflation side but still points in the same direction. The forecast in March for the core PCE in 2003 was 1.4 percent. That has been written down only slightly to 1.3 percent this month. But the future forecast for the core PCE shows a steady if small reduction in core inflation in the next few years, arguably ending up below some reasonable inflation-targeting level. This leads to a situation in which unemployment is high now and does not seem to be getting lower while inflation is low now and seems to be getting lower still. Believing, unlike Jack Guynn, that lower interest rates would stimulate spending, it seems to me that if a 1.75 percent funds rate was appropriate earlier in the year, as we all believed then, it is too high now. Our basic dual mandate would seem to argue for a reduction in the funds rate. This reduction would have to be explained as forward-looking policy—not a response to this quarter's strong growth but to expectations of future softness and a response that is not directed at the acute problem of a double-dip recession but at the chronic problem of a prolonged output gap. We could buttress the case by invoking negative uncertainties and insurance policies, but I would argue the case even if I felt that the baseline Greenbook forecast were perfectly accurate, with only garden variety negatives.

One could raise several objections to this recommendation. Let me briefly consider three. One is that long rates are near a floor and won't drop. Since the last FOMC meeting, long rates have declined 30 to 40 basis points. Both the nominal and real long rates are dropping. Inflation and inflationary expectations are dropping. Why is 3½ percent a floor level to long rates? I just don't buy this stickiness argument; I think we could budge long rates down, and I

think that would help the economy. And for those who worry about the zero bound, remember that one important lesson of the literature on the subject is that it's important to get rates down early and fast.

A second objection is that monetary expansion raises those types of spending that are already strong. We'd all prefer it if there were some way to stimulate the laggard types of investment spending. But outside of tax measures, and even they may have a limited impact, there doesn't seem to be much we can do directly about that. Short of working on investment directly, I think we have no choice but to work on the investment accelerator indirectly.

Lastly, let me say a word about military risks. There's incredible uncertainty about those risks. We don't know what kind of conflagration, if any, there might be with Iraq. Nor do we know what any such conflagration would do to oil prices or whether it should force us to raise or lower interest rates. One can come up with scenarios on all sides of this issue. But whatever the case, a military event would be a discreet event, as was September 11. If we were to meet the next day to size up the risks and change policy, nobody would question that. Therefore, I think we can leave that set of uncertainties for the future and get on with making policy for today's situation. To me that says we ought to cut rates. Thank you.

CHAIRMAN GREENSPAN. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. In its public statements the Committee has been characterizing policy as accommodative since March, and real overnight interest rates have been around zero and well below equilibrium levels since late last year. While the economy has indeed proven quite resilient, as President Jordan noted, even after nearly a year there is no evidence that output is headed back to—much less above—the level of the economy's potential, as might have been anticipated with this policy stance.

Both the Committee and the staff have identified a number of factors counteracting the effects of stimulative policy. Many of them relate directly or indirectly to the unwinding of the overbuilding and overvaluation of capital stocks in the late 1990s. Some of these restraining forces abated late last year, as overhangs in inventory and capital goods were worked down in many industries. And that contributed to the revival in economic activity this year. But some of the forces actually intensified over the summer, and that threatens to damp growth going forward. In particular, an unusual mid-recovery heightening of perceptions of risk this spring and summer greatly widened credit spreads and decreased equity prices.

In reaction to these same perceptions and to their financial market consequences, business caution—our umbrella term for the residual and not quite understood shortfall in spending—also seemed to intensify. This was related in part to the accounting scandals but not entirely, in my view. Equity prices began to drop sharply and credit spreads to widen before the collapse of WorldCom. And I think both investors and businesses are having trouble, as are we, understanding how this investment cycle will unfold.

That mystery has been deepened by the behavior of productivity. In contrast to the second half of the 1990s, businesses have been able to realize huge increases in efficiency without much capital deepening. These productivity gains boost household and business income, but the drive to take advantage of new technologies has provided less of an impetus to business spending than I had anticipated earlier this year.

The reasonable expectation is that these forces will abate over time, allowing the effects of policy stimulus to show through. The key question is how fast that will occur. We've gotten some mixed news on this over the intermeeting period. The ambiguous consequences of

productivity increases persist inasmuch as we appear to be experiencing another large gain with slow growth in the capital stock.

On the positive side of the ledger, credit markets have stabilized, allowing bond issuance to resume. We did get through August 14 without major new disruptions or tidbits of bad news. Moreover, and importantly, private final demand has turned out somewhat stronger than anticipated. Projections of both consumption and investment have been revised up for the third quarter. But whether these upward revisions portend stronger growth ahead has been thrown into doubt by anecdotes, earnings warnings, and further substantial declines in equity prices, which indicate that private-sector gloom has not lifted and may even have deepened. And labor markets remain weak, evidencing business caution about new hiring and limiting gains in household income.

There is no reason to expect that these restraining forces will go away very fast and in the staff forecast they lift gradually—gradually enough that the growth of the economy does not exceed the growth of its potential until late next year. In effect, the bad news is seen as already in the markets and reflected in business decisionmaking. As the economy continues to expand, equity prices should strengthen, risk premiums narrow, businesses become more confident, and previous declines in household wealth weigh less on spending. But all this is projected to happen relatively slowly—even with the existing policy stimulus—so that output gaps persist. This seems to me a reasonable forecast, given what we now know. But it's important to recognize that we are in uncharted territory in my view, especially when it comes to business investment.

The resulting trajectory for the economy is not all that bad. Output growth does pick up over time, eventually exceeding the growth rate of the economy's potential, and over the forecast

period inflation declines slightly from recent levels. But that outlook is not entirely satisfactory either, as Governor Gramlich just pointed out. Inflation is already about as low as it ought to go in my view. Society is gaining little in exchange for the lost output implicit in an economy operating below its potential. Moreover, a decline in inflation does leave the economy more vulnerable in the event of further negative shocks that the Federal Reserve could find difficult to counter, given the already low nominal funds rate. This may not be a major risk in the staff forecast, where inflation doesn't fall much. But if the decline in inflation is not minimal—if the path of disinflation were steeper because demand was a little weaker or potential output a little higher than in the staff forecast—it would be a more important concern.

To be sure, our ability to move the “not all that bad” outcome toward the optimal may be limited, given uncertainties about the economy and the effects of policy actions. And even if improvement were thought to be possible, now may not be the time to give it a try. We can talk about that later, but I do think the greatest challenge to policymaking in this and the next several meetings is not likely to be the threat of a relapse into recession on the one hand or the intensification of inflation pressures from easy policy on the other. Rather, like the Vice Chairman, I see the challenge as whether the risks and costs of an extended period in which the economy is growing but only moderately and where progress in eroding the margin of underutilized resources seems unlikely will justify an adjustment of policy.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. The initial line of the Greenbook indicates that the tenor of economic reports has been mixed. Obviously that is true. However, like others around the table, I think the picture that emerges is really quite clear. I see it in three separate parts, a triptych if you will.

In the middle panel is the baseline forecast, which—picking up on what Governor Kohn and others have said—I would describe as not all that bad but also not all that good. As we've already talked about, what we'll have according to the baseline forecast is growth that continues to be under potential for most of the forecast period. The result would be a positive output gap that lingers throughout the forecast period. Resources, particularly in the labor market, are likely go underutilized for several more quarters, and inflation, if anything, gradually recedes. Even with an accommodative policy I would describe this as a fairly bleak baseline outlook that may call into question our resolve with respect to achieving the two goals that the Congress has given us. One might argue with respect to the baseline that there's really nothing monetary policy can do at this stage because of the long and variable lags that we all understand exist. However, to that core part of the picture I add two others that may suggest a slightly more heightened sense of awareness on the part of the Committee.

First, I think some of the assumptions that support the baseline may turn out not to be as true as they appear to be on paper. If one looks at the household sector, as the staff analysis indicates, its performance depends on a number of underlying assumptions. Some of them I think are true. I do believe that productivity increases and the tax cuts already passed by the Congress will sustain consumption growth. However, some of the other assumptions I am less certain about. For example, the staff seems to be implicitly assuming that house prices will continue to rise. I would argue, based on some recent information with respect to whether it's the level of mortgage rates or the change in mortgage rates that drives both house prices and refinancings, that that's really not clear. Indeed, it seems unlikely that house prices or refinancing will continue to go up at the rapid pace they have recently. I would note that some of

that is still in the pipeline. But I'd say that during the course of this forecast we're likely to see it gradually erode, assuming mortgage rates don't continue to come down some.

Another thing that worries me a bit about the baseline forecast is the assumption that there won't be another extended round of negative wealth effects from equity prices. The staff assumes that, during this forecast period, equity prices will go up. However, during the intermeeting period we've already seen equity prices move down by somewhere between 6 and 8 percent. And the implied volatility of stock index futures suggests a great deal of uncertainty about future equity prices. If one adds to this the fact that corporate warnings have tended to move toward the disappointing side, I think that brings into question some of the basic expectations with respect to wealth and how that will continue to influence households and household spending plans.

A final element that worries me a little about the baseline is that I think we may be underestimating the degree to which this nagging underutilization of resources leads to the possibility of very paltry increases in wages and salaries, which again could have a bit of a negative impact. So I see obvious downside risks to the household sector forecast in the baseline.

I see something similar with respect to business fixed investment. The forecast calls for BFI to turn very sharply from negative 1.9 percent this year to positive 8.8 percent next year and to 10.5 percent in 2004. The factors expected to support this turnaround include some that are certain, such as tax incentives and a depreciating capital stock. But again, there seems to be a great deal of uncertainty with regard to some of the other factors. For example, the forecast suggests that an increased cash flow and an increased need for capital to meet growing demand are two elements that will stimulate businesses to invest, resulting in a turn in BFI from negative

to positive. However, I would say that neither of those developments is at all certain. We've already seen in the most recent indicator, for example, some suggestion of an ongoing slowing in production, not an increase. Similarly, I think a soft job market is another indicator of a soft production environment. I've already indicated that we've heard corporate warnings about disappointing top line growth. So that leaves basically only ongoing restructuring and productivity increases, both of which are powerful but neither of which is certain enough to produce the kind of turnaround in business fixed investment that the staff is expecting. So that's the second part of the triptych, if you will.

The third part of the triptych is the international environment. We've already talked about geopolitical uncertainties, and there's nothing new I could say there. I must say, though, that as I represent the FOMC and the System in international meetings I'm struck by what I think of as the passivity of policymakers in Europe and in Japan with respect to their weakening situations. We've already seen the Bank of Japan attempt to do something fairly strong and interesting, but it turns out, at least at this stage, not to have had much effect. And it's my observation—others have said this as well—that the situation in Europe seems to be getting no better and probably is getting worse. We're often criticized in these international meetings because we have imbalances within our economy. My response to that is that the problem is not imbalances within the U.S. economy but imbalances between the U.S. economy and the economies of Europe and Japan that seem to present the major challenges.

As you may or may not know, I am a real fan of modern art. But even I, having looked at a lot of interesting pictures, can recognize a truly ugly one when I see one! [Laughter] And I would describe this picture as moving from moderately unattractive to potentially much more

unattractive. The question is what to do about that. If I were not a more disciplined person, I'd discuss that in this round, but I will wait until the next one. [Laughter]

CHAIRMAN GREENSPAN. Governor Bies.

MS. BIES. I'm just going to summarize my remarks since many of them echo the comments we've heard around the table today. I believe the economic data that we've been seeing recently continue to show very mixed signs about the strength of the recovery. I would also echo the concerns expressed by others about the direction in which our forecasts are going. Since the beginning of the year, our staff forecasts for the fourth quarter of this year and for 2003 have continually been revised downward. In the past two months production worker hours and average weekly hours have declined. We know that manufacturing has been the weakest sector in this recession and recovery, but we're seeing industrial production slowing, not expanding. And inflation in our forecast is also continually being revised downward to levels that give me some concern, based on our discussion at the January meeting.

On the positive side, however, inventory liquidation appears to be leveling off, and the forecast has sales increasingly coming from new production by the fourth quarter. While business fixed investment appears to be nearing the end of its seven-quarter decline, sustained growth is not forecasted until the beginning of next year. Equipment and software investment has already begun to grow, and hopefully that should support continued improvements in productivity. Nevertheless, I share the concern mentioned that we may be experiencing a capital shallowing because of the length of time we've gone without an increase in investment.

The risks to the forecast to me appear to be increasingly on the downside, though. Economic growth forecasts in the euro area have been revised downward, and problems in other regions indicate weaker support for U.S. expansion from abroad. And I, too, am struck when I

go to international meetings that other countries seem to be waiting for the United States to pull them up, not the other way around.

Retail sales, especially for big-ticket items and durables such as automobiles, still appear to depend heavily on discounting. Rising house prices have sustained the consumer's wealth position against falling equity markets, and any decline in house prices could have significant impacts on consumer spending. However, since I still have a house in Memphis for sale, I'm less inclined to believe that there's a widespread bubble. [Laughter]

MR. GRAMLICH. Is that house for sale?

MS. BIES. Oh yes.

VICE CHAIRMAN MCDONOUGH. Still.

CHAIRMAN GREENSPAN. Are you bidding?

MR. GRAMLICH. No, I'm just pointing out that there's a bubble.

MS. BIES. Overall, I believe that one other concern mentioned around the table is increasingly coming to the forefront, and that is that the economy appears to be very fragile. That brings into question the ability of the economy to absorb any future shocks that may come from the various sources that we've talked about today. We don't have a robust recovery. In summary, I believe the risks of a slower economic recovery and inflation hovering around 1 percent are moving us very close to the time when we must consider further rate cuts.

CHAIRMAN GREENSPAN. Governor Olson.

MR. OLSON. Much like Governor Bies, a lot of the comments that I have prepared have already been stated, so I will just mention a couple of points. One is on the subject of fiscal policy. As the Chairman testified two weeks ago, the Budget Enforcement Act provisions are about to expire next week. Also, we will end the fiscal year without a budget for only the second

time in our history. And starting as early as perhaps this week but no later than next week, the government probably will be funded on a series of continuing resolutions from now until either February or March. The significance of that, I think, is that from a fiscal policy perspective the government will be locking in uncertainty for the next five or six months.

I'd note a couple of observations from the banking industry, many of which have already been discussed. The minimal business lending activity that is occurring tends to be for restructuring or lending to achieve additional efficiency. One issue that I think is of some concern is that shared credits or syndicated credits are particularly tough to arrange. The exception is leveraged business buyouts with strong partners, although there is some indication—as President McTeer and some others mentioned—that we may be seeing a bit of strength among medium-sized businesses. What I'm hearing from bankers, however, is that they sense that we're at the bottom of the cycle but they're unwilling to say so because they have said so now for some time. So there is a reluctance to suggest that this is the bottom. Also, we're hearing words like “fatigue” and “stagnation” being used to refer to the economic situation.

I was particularly struck yesterday by the report that we got—the chart that was mentioned earlier by Dave Stockton and the Chairman—showing corporate America in its most liquid condition in a decade. About thirty-six years ago I started doing cash flow analysis for debt service, and I don't remember a time when ample corporate liquidity was compatible with the expression “tough times.” When you combine that with the fact that the banking industry is in a strong capital position, a strong liquid position, and has good asset quality, I can't figure out if that should be reassuring or a point of concern. I think, on balance, it's more reassuring. And coming back to something President Jordan said earlier, given where we were a year ago, if we

had known then that there was so much dry powder in the system, I think we would have found that very reassuring.

On the other hand, the terms “fatigue” and “stagnation” suggest to me that there is a nervous impatience in the air. Combined with our fiscal circumstance, that impatience is certainly a cause for concern. My feeling, however, is that if the market is impatient, maybe this is the time for us to be patient. On the other hand, as had to be done two or three weeks ago in this city, there was enough anecdotal evidence out there that it was deemed necessary to move to a slightly heightened state of concern. I think the same is true for us. It seems to me that it may be time to move from a code yellow to a code orange.

CHAIRMAN GREENSPAN. Governor Bernanke.

MR. BERNANKE. Thank you, Mr. Chairman. I agree with many speakers today that the recovery remains disappointingly soft. The reluctance of firms to hire or invest is particularly discouraging given continued strong spending by consumers and the remarkable growth of productivity. The consumer and business sectors can't diverge indefinitely. That can be resolved in one of two ways, and one of them is rather unpleasant.

A particularly striking aspect of the Greenbook forecast to me is that it envisions continuing declines in core inflation. As shown in the table on page 11 of Part 1, the rate of increase in the core PCE deflator is projected to fall from 1.9 percent in 2001 to 1.3 percent in 2004. Over the same period the core CPI inflation is projected to fall from 2.7 percent to 1.9 percent and growth in the GDP deflator from 2.0 percent to 1.4 percent. Some alternative Greenbook scenarios have the core PCE deflator falling to below 1 percent by 2004. I think inflation as low as projected is potentially a serious risk for the economy. To the extent that we believe the Greenbook projections for inflation as well as the unemployment rate, both of which

suggest slack for the foreseeable future, this seems to me to be a prima facie case for easing policy at this point.

I understand, of course, that things are never that simple. There's an enormous amount of uncertainty to be reckoned with, and uncertainty suggests caution for central bankers as well as for businesses. One concern I do have about easing now is that it might exacerbate the imbalances in the economy by further heating up sectors that are already strong, such as residential construction and autos, while only indirectly benefiting investment and the labor market. I also appreciate the dangers of excessive fine-tuning, oversteering, and overshooting. For these reasons, I understand that we may want to wait to see how events unfold before taking further action. I hope, though, that we will not set the threshold for taking action too high. The strategy of preemptive strikes should apply with at least as great a force to incipient deflation as it does to incipient inflation. Thank you.

CHAIRMAN GREENSPAN. Thank you very much. That completes the roundtable.

We turn now to Vince Reinhart.

MR. REINHART.² Thank you, Mr. Chairman. I'd like to start with an observation about the market reaction to the announcement after your August meeting, using the materials that were just distributed. At that meeting, some members stated a preference to retain an assessment of balanced risks as to your dual objectives on the concern that market participants would read a shift toward economic weakness as signaling an intention to ease imminently. In the event, as shown in the upper left panel of your first exhibit, our estimate of the path of the federal funds rate expected by investors shifted up a tad in the near term immediately after the release of the decision. Apparently, market participants interpreted the decision as evidence of a reluctance to ease soon. But this apparent reluctance, the switch in the risk assessment, and the associated words, against a backdrop of declining equity prices, seemed to suggest a downward revision to the economic outlook consistent with the federal funds rate being 20 basis points lower over the next two years than previously anticipated.

Most market yields—such as the ten-year Treasury yield in the middle left panel—trended lower in subsequent weeks. This movement is hard to square with

² The materials used by Mr. Reinhart are appended to this transcript (appendix 2).

economic data releases, which were mostly mixed. One way to quantify this is to compare what happened with what would have happened had markets reacted to the surprise component of those releases as they had on average over the prior ten years. I've marked the major data releases by vertical lines in the panel, measured their element of surprise as the actual value less the expectation as surveyed by Money Market Services on the preceding Friday, and estimated the average response with a regression using the experience over the prior ten years. As noted in the middle right panel, the estimated contribution of macroeconomic data to the change in the ten-year Treasury yield over the past six weeks nets to about zero.

That is pretty much how the staff reacted to the data, in that the outlook presented in the most recent Greenbook does not differ materially from what you saw in August. One possibility explaining the 50 basis point drop in the ten-year Treasury yield is that other events intruded, including warnings on earnings that further deflated equity values, elevated concerns about another war in the Gulf that prompted a bit of a flight to safety, and heightened mortgage-related hedging flows that Dino mentioned. Another possibility, though, is that your policy choice at the August meeting, amplified by subsequent public statements, sensitized market participants to the potential for slower growth in spending and production going forward than previously expected.

While the near-term economic outlook was about unchanged over the intermeeting period, you also received information in the Greenbook about the anticipated performance of the economy over a longer period. In that first look at 2004, the unemployment rate ends that year about where it is right now— $\frac{3}{4}$ percentage point above where the staff presently puts the natural rate of unemployment. In the interim, the unemployment rate is projected to rise a bit from its current level, a prospect that you might find likely given the stubbornly high level of initial claims for unemployment insurance. As a result, the Greenbook poses the possibility of the unemployment rate averaging close to 6 percent over the next $2\frac{1}{4}$ years.

The “policymaker perfect foresight” simulations reported in the Bluebook and repeated as your next exhibit offer potential paths for the funds rate that make more-substantial inroads into resource slack than in the Greenbook. To be specific, these simulations take the staff outlook and the FRB/US model as assured representations of how the world will evolve over the next five years and assume that policymakers care equally about deviations of unemployment from its natural rate and core inflation from an assumed target. Even with a penalty placed on changing the funds rate, the perfect foresight policymaker embarks quickly on a path that sends the real funds rate deeply negative by the end of this year—whether the inflation goal is 1 or $1\frac{1}{2}$ percent. Much as in these simulations, you might view easing policy $\frac{1}{4}$ or $\frac{1}{2}$ percentage point at this meeting as taking the opportunity provided by the ongoing favorable inflation environment to ensure more-solid growth of aggregate demand with an eye toward making more progress in fostering employment gains.

Policy ease at this time could find additional favor for two key reasons. In particular, the Committee may harbor concerns about the sustainability of the economic expansion. In the staff forecast, household spending is expected to flag sometime soon as the allure of buying still more cars and SUVs fades as incentives become less generous. Real activity continues to expand despite this rough patch because firms are anticipated to pick up their spending on capital goods and to rebuild their inventory stocks. In an environment of heightened risk aversion, businesses may not be quite that willing to step into the breach. Moreover, economic growth has cooled in many of our key trading partners, and you may have doubts about whether policymakers abroad will have the willingness or ability to offset this weakness if it should intensify.

Policy ease might also be warranted if the Committee found the Greenbook too pessimistic on an important aspect of economic performance. The staff has explained the good output-per-hour performance of the past few quarters as actual productivity drifting further above an unchanged trend of structural productivity. If, as noted in an alternative simulation in the Greenbook, the staff has been too cautious on that score and the trend line has in fact rotated up, core PCE inflation may be headed south of 1 percent by year-end 2004, potentially below the range many of you would define as price stability. This might be particularly worrying if you take the decline in some measures of longer-term inflation expectations over the intermeeting period as evidence that markets have put more weight on that possibility as well.

Although simulations such as the ones on this exhibit might be taken to support a move of either $\frac{1}{4}$ or $\frac{1}{2}$ percentage point at this meeting, there is obviously a lot more that has to enter your deliberations than the mechanical application of a model. In particular, market participants will read what you do and say closely for signals on your assessment of economic prospects. In the current situation, it may well be the case that the stimulative effect of lowering interest rates would be offset some if that action were accompanied by the retention of a statement that the risks remained tilted toward economic weakness. If so, this might incline the Committee—if it thought easing were appropriate—toward a larger move rather than a smaller one to allow it to assert more credibly that the risks were balanced. An unfortunate aspect of this sort of interaction between the decision on the funds rate and on the balance-of-risks assessment is that it may make modest policy adjustments more difficult to accomplish at this stage in the policy cycle. One potential way to ensure that the policy process remains flexible is to consider the possibility of an intermeeting move should incoming information indicate that spending was losing momentum or geopolitical events turn adverse.

But your outlook may be such that policy ease of any magnitude would be judged to be inappropriate at this time. Making the case for keeping the funds rate at $1\frac{3}{4}$ percent at this meeting can be accomplished by listing what was wrong or omitted in my discussion of the policymaker perfect foresight simulation—and some of you may believe that is a long list indeed. But whatever its length, the list has two

subheadings: inadequacies of the process itself and problems with its maintained assumptions.

As to the former, the process of calculating an optimal path for the funds rate using the FRB/US model may lend itself to recommending excessive fine-tuning of the economy for two fundamental reasons. For one, the model has the property that U.S. monetary policy has a small, but discernible, near-term effect on spending while inflation depends on a long cumulation of output gaps. This offers policymakers the opportunity to vary short-term interest rates at a high frequency to shape the near-term dynamics of spending without giving up much on inflation in the longer term. You may assess the ability of policy to affect aggregate demand over the current and next couple of quarters to be much smaller than the point estimates in these numbers. For another, these model simulations are done under complete certainty, suggesting a degree of confidence in the channels of policy that you are unlikely to share. In the current circumstances, the Committee may be particularly unsure as to how financial markets will react to any policy surprise. In the presence of this kind of uncertainty about the policy multiplier, the Committee might want to shade its desired policy setting toward that which will not surprise markets. With investors counting on policy staying on hold, this would counsel inaction at this meeting.

But the Committee may also favor keeping policy on hold because its outlook differs from that conditioning the simulations I've been discussing. As shown in your final exhibit, the real federal funds rate already lies below zero, and the gap from most estimates of its equilibrium value remains substantial. While survey measures of consumer confidence have moved lower, households have been avid buyers of big-ticket items, perhaps suggesting their spirits are undimmed. Additionally, the Committee might be concerned that any additional policy impetus would flow through a relatively narrow channel, feeding the recent rapid rise in home prices and further encouraging households to stretch their balance sheets. While this might support topline GDP for a time, it might also create imbalances that will pose problems down the road. This, of course, is not a new tension in policymaking: By definition, interest-rate-sensitive sectors bear the brunt of adjustments in interest rates.

With the outlook about unchanged, holding the funds rate at 1¾ percent would seem to be consistent with retaining the balance-of-risk assessment tilted toward economic weakness, especially considering what appears to be low odds of a pickup in inflation in the foreseeable future. While it is true that two dates that caused concern *ex ante*—the August 14 recertification deadline and the September 11 anniversary—proved uneventful *ex post*, enough in the world remains uncertain to justify that judgment. Indeed, markets remain skittish, the potential for military action in Iraq seems significant, and the threat of terrorist attack at home was raised to “high” since you last met.

CHAIRMAN GREENSPAN. Questions for Vincent? Obviously, you have been convincing as usual. I think there's an emerging consensus within this group as to how we ought to be looking at the economy and policy. In this regard, I believe it's important to summarize a few developments and list various alternatives that we confront.

First, I think it's fairly evident that unprecedented levels of equity extraction from homes have exerted a strong impetus on household spending. We see this in the incoming aggregate data on such spending, though not in measures that reflect consumer attitudes and psychology. We know, for example, that the level of existing home turnover is quite brisk and that the average extraction of equity per sale of an existing home is well over \$50,000. A substantial part of the equity extraction related to home sales, which is running at an annual rate close to \$200 billion, is expended on personal consumption and home modernization, two components, of course, of the GDP.

The long duration of the currently elevated level of home sales is a bit of a puzzle. At some point it has to drift down to a more normal range, but it's not doing so thus far. Similarly, the historically high level of refinancings in the third quarter, as reflected in the data on applications reported by the Mortgage Bankers Association, is creating a very large increase in cash-outs. We estimate that they, too, are running in the \$200 billion range at an annual rate, up very significantly from where they were a year or eighteen months ago. Perhaps more importantly, there is no evidence of a slowing in refinancing activity. The average rate on *new* thirty-year fixed-rate mortgages is well below the average rate on *outstanding* mortgages. This differential plays an important role in models of refinancing activity constructed here at the Board. The models, which fit the historical data very well, suggest that refinancing activity should continue quite strong in the months immediately ahead. Accordingly, we are likely to see

fairly high levels of actual cash flows, the monies made available from the cash-outs, until the end of the year and perhaps beyond.

The impact of this development is not easy to isolate from the rest of what is going on in the economy, but there is no question that a goodly part of the robustness of household expenditures stems from this source. Cars and light trucks, which have been quite strong, are examples of the types of large ticket items that are disproportionately purchased when equity is extracted from the sale of a home. It seems likely that increases in the average size of cash-outs will persist, and one would expect these monies to have an impact on purchases of motor vehicles and other big-ticket items. Indeed, I suspect that's what we are seeing.

It's hard to know how long this process can go on, as Governor Ferguson mentioned. In my view, it has been induced to a substantial extent not so much by the level of the thirty-year mortgage rate but by the fact that the rate has been falling at a fairly pronounced pace. Our models on existing home sales actually suggest that the level of the mortgage rate is what determines the level of existing home sales; but this is a complex issue, and it remains to be seen whether in fact the net change in the mortgage rate has an impact on sales. Obviously, it must have an impact on refinancings because, if the rate on new mortgages stays under the average rate on outstanding mortgages for an extended period and fosters heavy refinancing activity, those two rates must converge. And as they converge, the propensity to refinance must invariably fall.

There is some evidence of modest slippage in the sale of motor vehicles after the quite riveting increases in such sales in July and, even more surprisingly, in August. Through the first twenty days of September, motor vehicle sales slipped back but they continue to be well above

normal in that we are still seeing sales in the area of 16½ million units, a total that would have been viewed as bizarrely excessive a couple of years ago.

We saw a fairly pronounced drop in last week's chain store sales, which is consistent with the reports we've heard around the table. However, I must caution you that those chain store sales figures are not all that useful as indicators of overall merchandise sales, especially the weekly data that we look at. Motor vehicle sales obviously are as close to an exact number as we get in economic statistics, and the estimates we are talking about basically come directly from the motor vehicle manufacturers. Indeed, it is essentially their tabulations, car for car, that appear in the personal consumption expenditures component of the GDP. So in appraising consumer spending, there is a very big difference between motor vehicle sales and chain store sales. One is really accurate; the other is close to dubious. Even so, the fact that both are moving in the same direction is suggestive in my view of some slowing in the growth of overall retail sales.

Another positive element in the outlook is the fact that inventories are getting tight. Our weekly industrial production data suggest a very modest increase for the month of September but probably not enough to prevent some inventory liquidation from continuing. I say "continuing" because I frankly don't believe the latest book value figures that we have. The reason I say that is that the inventory patterns that we get from the industrial production index together with our efforts to track the movement of goods indicate that, after some buildup in the second quarter, inventory accumulation turned decidedly negative in July and August. That in turn is consistent with the fact that industrial production has flattened out quite significantly even though industrial consumption still seems to be rising. What all this indicates is that the GDP data and the industrial production index are telling us different stories. Indeed, when we endeavor to infer

activity in the industrial sector from the GDP data, we find that it is rising relative to our official industrial production numbers. To be sure, there is a question as to which is the more accurate estimate. A fairly significant part of the initial monthly estimate of the industrial production index is based on the hours data and the judgments that we make concerning productivity. We can't be certain about its accuracy but, as Dave Stockton points out, the anecdotal information does seem to be more consistent with the slower pace of industrial activity indicated by our index than is inferred from the goods and structures components in the GDP data, taking out the markups and making the various judgments for imports and exports that one would get from the GDP system. I conclude that we are dealing with a fairly tight inventory situation, which is a plus in that we also have, as was mentioned before, fairly good liquidity in the corporate sector. In a sense this economy is in a position to move forward if a number of the negatives that I will get to shortly are removed.

Another obvious positive is the behavior of the productivity data. I, at least, believe it's an unequivocal positive, although the employment figures clearly are not. It's really quite startling to see how significant the productivity numbers are. In the GDP accounts, we tend to look at the product data, and those data are showing fairly strong increases. Nonfarm productivity was up 4.3 percent at an annual rate in the second quarter. Did you say you're using 4 percent for the current quarter, David?

MR. STOCKTON. Actually, we reduced it to about 3.8 percent, allowing for some revisions in the hours data that we got late last week.

CHAIRMAN GREENSPAN. So, for all practical purposes productivity is still very strong as measured from the product data. It's even stronger when calculated from the data that are based on gross domestic income. The statistical discrepancy between the two estimates is

increasing because the growth of the GDP measured from the income side is moderately stronger than what we are seeing on the product side. Obviously, that relative strength spills over dollar for dollar into the alternative productivity estimates. And, of course, that's the reason that nonfinancial corporate productivity based on income-side data is a good deal stronger than overall nonfarm productivity. For the last four quarters through the second quarter, the income-based productivity gain was 6.4 percent for nonfinancial corporations. That is a quite startling increase, and indeed I would imagine that business firms have expended a great deal of effort to increase productivity through various means, including the use of previously unexploited efficiencies. At least, that was a fairly solid argument that could be made early this year, but it gets pretty thin this far out into the recovery. One would think that business firms had scraped the bottom of the barrel six months ago. What we have is very substantial multifactor productivity growth because clearly we're not getting very extensive capital deepening. Something is happening, but it is not evident in the data. The hours figures we pick up independently from the household survey track the payroll hours fairly closely, and a substantial part of the strength that we see in the GDP data is in real product numbers. So, it's not a data problem. It's a data dilemma, but the answer is not that the data are faulty.

Interestingly enough, there has not been a significant acceleration in profitability. We've gotten some, but margins actually have been flat for the last three quarters. The reason is that we are getting some price deflation in the corporate sector. Part of the acceleration in productivity is showing up in lower prices rather than in higher profit margins. Nonetheless, the data themselves look pretty solid and fairly impressive, and one wonders why all the corporate managers are so gloomy if those data are accurate. Well, they are gloomy largely because they have no pricing power. They see very weak nominal sales, with the prices of many of their

products falling abruptly while the growth of their real output is quite significant. Indeed, that's where a goodly part of the productivity gains are coming from.

It's this basic attitude in the corporate sector that I think is the source of most of the major negatives. As I will argue in a minute or two, I think they could very readily have been overcome were it not for two facts. One is the corporate governance issue; the other is the very obviously increasing uncertainty arising from geopolitical risks. You will recall that the economy seemed to be doing reasonably well through June. And even though it's difficult to prove and indeed there's some evidence to suggest the contrary, my view is that the WorldCom scandal is the issue that really hit home. It told us that Enron was not alone. And indeed the WorldCom situation comes close to making Enron look inconsequential with respect to the scope of the malfeasance that is gradually being revealed. One had to dig to find the misrepresentations employed by Enron. Their procedures were very sophisticated, with all sorts of special purpose vehicles and other questionable accounting procedures. WorldCom didn't do it that way. They just put in big fat numbers, forgot everything else, and got away with it. My shock at the accounting profession has not worn off.

I think the impact of all that is now fading. And indeed were it not for the rise in oil prices and the geopolitical risks that are emerging, I would say the chances of the Greenbook forecast being realized are quite reasonable. All of this is eerily reminiscent of October 1990. In fact, I just looked at a chart that reflects the emerging uncertainties of the Gulf War. You will recall that the price of oil was going straight up after Iraq's invasion of Kuwait. It peaked in October, and the war was not actively engaged until many months later.

What occurred, as best I can judge, is that either the tax effects of the oil price rise or the repercussions on confidence had a very material effect on the economy despite the fact that the

National Bureau has labeled the peak of the expansion as occurring in July 1990. If we look at the individual data, nothing really moved down significantly until October 1990, and then everything fell out of bed. Between July and October everything tended to drift. The first sign of a significant downward tilt in the economy was, as I recall, a fairly marked pop in initial claims. We haven't quite seen that thus far. Yet, as of earlier today the price of West Texas intermediate oil was over \$31 a barrel—I haven't seen the latest price quotation. So oil prices have moved up fairly quickly, and the effects seem to be spilling over into the stock market and having a variety of other predictable repercussions.

As a number of you have indicated, the rest of the world is scarcely helping our economy. Indeed, the economies in Europe—I should say the euro area—and Japan are continuously eroding. The United Kingdom is doing better. Who said the Japanese are the Japanese?

VICE CHAIRMAN MCDONOUGH. Japan is Japan. I said that.

CHAIRMAN GREENSPAN. Japan is Japan; that is the equivalent. I subscribe to that very incisive thought without defining what it means.

MR. FERGUSON. Well, it has to be true! [Laughter]

CHAIRMAN GREENSPAN. Oh, stop your erudition! [Laughter] The problem that we're confronted with is that we used to believe that the monetary response to an oil price spike was indeterminate. Indeed, a very strong argument was made in earlier years when such price spikes occurred that the appropriate response of the monetary authorities was to tighten, not to loosen, policy on the grounds that the central bank should prevent the oil price increase from spilling over and inducing inflationary pressures in the non-oil segments of the economy.

The historical experience is now sufficiently conclusive in my view to suggest that that's not what happens and that oil price spikes have a negative influence so far as GDP is concerned.

That outcome does not show up in our econometric models largely because the coefficients that we get in our models reflect the impact on GDP of the average change in the price of oil. And if, within a limited range of that type of coefficient, we put back into our model the price changes that actually occurred in earlier periods before the start of a recession, the model will not forecast a recession. Indeed, that happens time and time again, and we are confronted with the obvious question as to why it happens. This suggests that the coefficients may in fact be significantly higher under certain conditions, or it may be that the coefficients are nonlinear and rise with the rise in the price of oil. As a result, the marginal impact increases as the rise in the price of oil occurs. The trouble, unfortunately, is that we have too few observations to test that hypothesis in any meaningful way and what we know is largely anecdotal. Anecdotes are in effect small samples. They have small sample variations, but the mean of a small sample is better than not having any information at all.

I think the way this leads us to look at current events is to recognize that somewhere within the next month or two this uncertainty is going to resolve itself. One scenario is that we are going to get the impetus from developments that I would associate with potential pent-up demands—that is, considerable liquidity in the corporate sector, very tight inventories, capital investment that has been held down to a marked degree, productivity that is still improving, costs that are still improving, and profit margins that presumably are at least holding or maybe even rising. Those factors are the tinder for a strengthening economy, if we take away the negative psychology, and they are really quite positive. Indeed, it could turn out that the upside scenario presented in the Greenbook is too low.

I believe, however, that the evidence is tilted more strongly to the other side based on what history tells us. We have to be very careful at this point because we're going to get

important statistics in the next several weeks. The August data on manufacturers' new orders are going to tell us a great deal. The general expectation is that after the sharp rise in July, orders are going to come off 2 to 3 percent or something like that. If that happens, that will tend to confirm that the capital goods markets are still in an uptrend and that the Greenbook basically is on the right track. If on the other hand that number turns out to be very significantly lower, it will confirm that a real pullback is occurring. And indeed it would be reasonably appropriate to attribute that weakness to the growing geopolitical risks that we're seeing and the general fears that are emerging. After all, this economy has behaved in an extraordinarily resilient manner, taking one hit after the other, and it didn't slow significantly in 2001. Indeed, we might have benefited in retrospect if it had slowed more. That would have given the economy a greater bounce coming out of the recession. But because the decline was limited, we do not have a strong bounceback, and we're now getting confronted with adverse psychological factors. One can say that some of the latter are endogenous, but there is no means of which I'm aware to factor endogenously into our FRB/US model the uncertainties of a possible war with Iraq. And this is where a really important question occurs.

I think we have to be careful about how much of a margin we have before deflation occurs, although my answer to the question of what we do if we ease too much is to recognize there is nothing written in stone that stipulates we should operate only in the overnight market. There are numerous positive nominal interest rates as we move out on the maturity spectrum. And there is a great deal that we could do in the way of monetary expansion even if we are dealing with de minimis overnight rates. So I don't think that the downside barrier is as rigid as we generally believe unless we take as a given that the central bank can only operate in overnight

funds. If that's the case, then potential deflation is a more worrisome concern than I think we've allowed for. However, I don't think that is the case.

My own view at this point is conditioned by our not knowing what the August orders data will show or what the next initial claims number will be. However, we know that it is quite possible, if history is any guide, that we may be near the end of a deep funk—if I may coin a word—and that we may come out of it fairly quickly and wonder later what was bothering us. I doubt that will happen, but I don't think it's appropriate to rule that out as a possibility. I have seen too many instances in which that sort of a turnaround has occurred, much to our chagrin. As a consequence, I would prefer not to move today even though I know there is a good deal of sentiment around the table to do so. But I do think we have to convey in one way or another that we may well move before the next meeting. I'm a little concerned about the next meeting itself largely because—what is its date?

VICE CHAIRMAN MCDONOUGH. A Wednesday. The previous day is Election Day.

CHAIRMAN GREENSPAN. Well, it strikes me that even though we don't take account of political considerations in our decisionmaking, there will be many people who will wonder what we had in mind. So I think we should try to convey something additional in the statement that we will release after today's meeting, not just the usual "we'll keep monitoring business conditions." In any event, I would like to stay where we are and obviously retain the negative balance of risks statement while also indicating in our statement something along the lines that the uncertainties are due in part to the emergence of heightened geopolitical risks. What I think such a reference will do—and indeed the possibility of war in my judgment is where the real uncertainty lies—will be to characterize our explanation more as a form of insurance instead of being seen as an indication that the Federal Reserve has turned very severely negative about the

outlook. And because we are in a period where there is extraordinary uncertainty about what is happening, we have a disproportionate credibility. Accordingly, I think we have to be careful about conveying an impression that we think the economy is weakening because that can be a self-fulfilling prophecy. In sum, I would very much like to find a way in which we can portray this policy decision as one intended as insurance as distinct from our more usual type of policy moves that are directed toward longer-term economic objectives. I happen to believe that if we could somehow take the geopolitical risk and move it aside, if all of a sudden Saddam let in the inspectors and they really were able to look everywhere in Iraq, the equilibrium price per barrel for West Texas intermediate oil, as best I can judge, would probably be around \$21 or \$22 a barrel. I believe the market price would move in that direction fairly quickly and that would have a very positive economic impact.

So I view the geopolitical risk as a goodly part of the uncertainties that are confronting us, and frankly I think we ought to say that in our press statement, if indeed the Committee agrees. So that's where I am. To summarize, my inclination is to do nothing at this moment, stay with the balance of risks toward weakness, but to keep in mind the distinct possibility that we may want to move before the next meeting. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I concur with your recommendation, but I would like to explain why. If we were to move today, I believe that would send a signal that we know something about the economy that nobody else knows. The markets, the American people, and those around the world simply are not prepared for that. Now, one of the reasons they're not prepared for it is that we on this Committee have had too much to say recently. Because of the geopolitical considerations going forward, I think it is extremely important that—with the exception of the Chairman, who happens to be giving some

speeches tomorrow in London—all of the members of the Committee use common sense and remain quiet about monetary policy. I say that because it will be very difficult for us to amplify on the statement that we will release after this meeting. Few of us—probably none of us—can pretend to be great geopolitical experts, so we shouldn't be giving speeches about geopolitics. If we say that we didn't take an action but we still believe that the risk is on the downside, I think we've said everything that needs to be said. Saying that the outlook is gloomier creates problems, and saying that everything is okay is contrary to what we've heard at this meeting. So I sincerely hope that we can maintain some discipline.

Second, I do believe that the economic situation will likely clarify itself in the next four or five weeks, and therefore if we move at all—and I say if—it may well be in an intermeeting move. Thank you.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Mr. Chairman, I support your recommendation. Let me outline a few thoughts that I had as I walked into our meeting this morning. I started with a question: Will growth momentum develop soon? You mentioned that we might know in a few weeks or perhaps in a few months. Clearly, we have heard a lot of negative reports. It's not that the economy is sinking but just that the momentum isn't really there. If the answer to my question is "yes," that the momentum can be reasonably expected to develop, then we need to be patient. Alternatively, at some point presumably our patience will become exhausted. In fact, we might even look back and wish that we had been a bit more impatient a little sooner. So an option is to attempt to give the economy a kick in the rear end to get it moving rather than just waiting.

Now, we do seem to be faced with a general malaise, particularly in the business sector. I often try to think about what's going on by asking myself what real surprises I can imagine—

what two standard deviation events or data are we confronted with—that would change the way we view the outlook. I think there are two, really. You mentioned one: productivity. I would add what has been going on with long-term interest rates, particularly the real long-term rate of interest. In fact, those two developments together produce a puzzle. If we look at most of the real data, relative to the forecasts that we made last spring, they are one standard deviation or less—that is, the data are not coming in all that much differently than one could reasonably expect. There are no big surprises in GDP, industrial production, and so forth. But the productivity number is a surprise. And, of course, that mirrors, I'd say, a modest downward surprise in employment growth. With output coming along more or less in line and with employment growth being minimal, that gives us a productivity surprise.

By the same token there has been a rather substantial decline in the last six months in the ten-year bond rate, for example; the ten-year indexed bond rate is down about 100 basis points. That is, rates other than shorter-term rates have come down a lot, too. So, we have a productivity surprise, which presumably one firm after another is looking at, and yet one way to read the decline in the expected real rate of return is that the long-run growth prospects for the economy and productivity growth have been marked down. I don't know how to reconcile a decline in the real rate of interest with a step-up in productivity growth. I think that's a puzzle.

I do believe that we need to be open to a rate cut in the future. As you were talking about the possibility of an intermeeting move, it occurred to me that if we get what I'll call an Iraq-related event, some geopolitical shock, the stock market probably is going to react to that news before we do. And one of the issues we're going to have to face is whether our action would be viewed as bailing out the stock market. I think we have to be very careful about that because I just don't like being in the business of responding to the stock market. Thank you.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. I endorse both parts of your recommendation, including the implicit part about dealing with geopolitical risks in the statement. Let me take a minute to talk about two or three other issues.

One issue that a few people raised was a concern about unbalanced growth. In that regard, Vincent picked up on a point that he and I discussed yesterday, which is that, by definition, interest-sensitive sectors move more than other sectors in response to changes in interest rates. One of the Committee's mistakes back in the 1970s, I think, was being too concerned about tanking the housing market and, therefore, the FOMC was slow to lean against inflation. Being concerned about stimulating the housing market should not slow us down here because housing is an interest-sensitive sector. To put the philosophical question on the table: If the choice is between unbalanced growth that gets the economy back to trend or a perfectly balanced economy that's growing infinitely below trend for a long period of time, I know what my loss function looks like. So I would leave that one off our list of concerns.

I'd also like to cover two other points that you made. One is the date of our next meeting, November 6. I would argue that, if the data are clear, they are clear, and we will do what we should do.

CHAIRMAN GREENSPAN. Yes, we'll do it anyway.

MR. FERGUSON. Clearly, you didn't disagree with that. The other point is that it will be interesting to see if in fact for the first time, at least in my short period on the Committee—though I know you've been looking at the economy on a daily basis for fifty years—the next two data releases clarify the situation. [Laughter] If they do, I will be quite shocked. I suspect that the next time we get together we'll have a little on one side and a little on the other.

CHAIRMAN GREENSPAN. I hope you're right.

MR. FERGUSON. Those are my comments, but I do support your recommendation.

CHAIRMAN GREENSPAN. Thank you. Governor Gramlich.

MR. GRAMLICH. I can be very patient with those who have more patience than I have, [laughter] but I'm afraid I've seen enough evidence of weakness already.

CHAIRMAN GREENSPAN. Is that the end of the sentence? President Hoenig.

MR. HOENIG. I support both parts of your recommendation, Mr. Chairman. As I said earlier, it would be nice to see how this economy would be performing if we could lift this heavy-handed uncertainty, but at the moment that is not an option. I think that does put us in the position of having to watch the situation carefully. And if the economy doesn't improve or if we have a disruptive event, then we have to be prepared to move, whether in the intermeeting period or at the next meeting.

CHAIRMAN GREENSPAN. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I also support both aspects of your recommendation. With inflation about as low as I believe it should go and with the possibility of persistent output gaps and further declines in inflation, I would argue that the principal threat to good economic performance is subpar growth. And I certainly think our statement ought to continue to make that point.

I'm not yet ready to lower rates to address my concerns without more evidence. I do give some weight to the stronger data on private spending that we've gotten over the intermeeting period. Especially in light of the difficulty of forecasting and the uncertainties, I'm willing to wait for added information though, like Governor Ferguson, I wonder whether it really will clarify everything or raise new uncertainties.

If the incoming data over the intermeeting period confirm the weaker picture portrayed in the anecdotes that we've heard around the table, then I think the Committee does need to give serious consideration to easing the stance of policy further. As to whether that should be at a meeting or between meetings, I think the Committee has been well served by trying to keep actions at meetings. I don't think November 6 is a problem. It's the day after the election. It would be a problem if it looked as if we had put off taking an action until after the election. So I think it would be appropriate to move intermeeting, if the data suggest that that's the right thing to do, or at the meeting if we can wait.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you, Mr. Chairman. I concur with your recommendation because I think that the near term is dominated by uncertainties of a global nature. For the longer term, though, all deflations or disinflationary impulses are not equal. And deflationary pressure in the goods sector coming from extraordinary productivity gains in that sector does not call for a policy response.

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. I support your recommendation. In my view the key issues are the uncertainty and the inability to get traction in the recovery. I think we will get some clarification on where the economy is, going forward. So I think the best thing to do is to wait and see.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. I support both parts of your recommendation. I just want to make two comments. One relates to the point you mentioned about the credibility of the Federal Reserve and the Federal Open Market Committee, which I think is extremely important. I support fully your suggestion that we describe any easing move

as a form of insurance, because the situation could change quickly. If we lower rates, we may find that we will have to move in the other direction very quickly as well. We have to be prepared to do that. So describing it as insurance or putting it in that context I think helps the credibility of this Committee. The second point is on whether we should move before the next meeting if appropriate or at the meeting because of the election. I think we must let the data decide. If it's appropriate to move, we should move.

CHAIRMAN GREENSPAN. I don't wish to imply anything other than that. I was being facetious when I was talking about that.

MR. MOSKOW. I didn't think you did imply anything other than that, but I just—

CHAIRMAN GREENSPAN. Fortunately, I think we have built up a degree of credibility such that the notion that we would move for political reasons hasn't really arisen—other than among an inevitable number of commentators—in a very, very long time. And I believe that's really to the credit of this organization. I think our record has been really quite impressive in that respect.

MR. MOSKOW. Absolutely. And we all want to keep it that way.

CHAIRMAN GREENSPAN. You bet. President Broaddus.

MR. BROADDUS. Mr. Chairman, I strongly support your recommendation. I want to make clear that what I was talking about earlier was contingency planning—thinking about what we would do if we hit the zero bound—and that's a different issue. But with respect to the immediate situation, looking at the whole probability distribution around the forecast and not just one tail of it, I think staying with our current stance is best for now.

I would make one other comment. Ned Gramlich made the point that when you're in the vicinity of the zero bound and you see weakness, it's important to move in order to avoid getting

there, and I certainly agree with that. But what I've taken away from what I've heard in conferences and read about this topic is that in such a situation the central bank has to move very aggressively and decisively to establish credibility for our ability to undercut the deflationary impulse. I don't think a small move of, say, $\frac{1}{4}$ point would do that. That, in my view, would smack a bit of fine-tuning. So to me it's not so much a matter of timing as of amount. As we go forward, if we see evidence that the economy really is beginning to weaken, given our proximity to the zero bound we might want to consider a move of more than $\frac{1}{4}$ point. I think that's an issue that we ought to have on the table at that time.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Mr. Chairman, I don't think our individual views of where we are or even what is around the corner in the next few quarters are all that different this morning. In fact, I'm probably on the less optimistic end of that range of outcomes. As my earlier comments suggest, I'm probably still in the minority today in terms of my thinking about our policy options. I understand and certainly respect the views of others, but I have a different view of the risks and rewards of further easing at this point. Based on my understanding of where the economy is, I don't think we're dealing with the need for an interest rate cut at this point. I don't think it's going to speed the adjustments that we're still hoping to see made.

We'd love to see some more investment spending, but not a single businessperson I've talked to has suggested that a slightly lower interest rate is going to spur investment spending. In fact, I'm struck by the telecommunications industry, which I think is a poster child for the excesses we're trying to get worked out. The CEO of the large Baby Bell that runs the phone company in the Southeast pointed out that they cannot possibly grow their way out of the mess they have in that industry. The only thing that is going to bring any kind of equilibrium to the

industry is further contraction in the number of firms that are involved. I think the CEO would worry that any additional easing at this point might prolong the time that it will take to get some of the marginal players out of the business. It might even lead to additional irrational pricing in the short term, which would only exacerbate the problem of getting back to profitability and stability. So, using that as an example, I just don't think that a rate cut is likely to have the kind of effects we intend. I'm not even sure that, if we could induce additional car and house purchases, it's something we really want to do. And I'm not as convinced as others seem to be that creating an environment where people extract still more equity from their houses is all good.

In summary, I have to say that, while I certainly understand and support the notion of retaining the balance of risks sentence as it is in the draft statement—and I think the way you suggested is the best way to do it—I believe there is still a case for some patience. I think we should trust in the resilience of the economy and its fundamental ability to work through this situation, assuming that one of those terrible geopolitical risks that you talked about doesn't materialize. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. I concur. I can be patient as well. I must say, as I indicated in my earlier remarks, that I've had concerns similar to those that President Guynn just mentioned about the downside risks of moving interest rates ever lower. But I am concerned as well about the persistent economic gaps we have, gaps from what I would consider to be a more optimal rate of economic growth, pace of employment growth, and inflationary change. I don't view the outcomes we're seeing in the Greenbook baseline and the alternative simulations as optimal. And those, I think, are sort of the best case outcomes we can hope for. So I am concerned about that.

I have to agree with Governor Ferguson about this issue of data clarification. I'd be surprised if there were a smoking gun in any of the data over the next two or three weeks that's going to tell us unequivocally that we should either maintain our current stance or move rates lower. And, frankly, I have a deep preference for moving at a meeting as opposed to outside of a meeting. But that's something we'll just have to talk about when the time comes. I think that's all I have to say.

CHAIRMAN GREENSPAN. Governor Olson.

MR. OLSON. I support both parts of your recommendation. In the brief period of time that I've been here, it seems that every word that is changed in the press statement that accompanies our policy announcement generates ten additional questions. But even having said that, I think it's very important to acknowledge the geopolitical risks today. I think that's particularly critical.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, I support both parts of your recommendation. I'm not yet ready to lower rates, and I hope that the data we receive over the coming period will clarify the issues we have discussed, although I doubt that they will clarify the situation greatly. My hope also is that a decision can wait until the next meeting.

CHAIRMAN GREENSPAN. Governor Bies.

MS. BIES. Mr. Chairman, I support your recommendation. But I guess I'm more anxious than President Parry because I am getting very concerned about the lack of momentum and robustness in the recovery despite the geopolitical situation. I do think we need to pay close attention to what is happening as the data are released in the next few weeks.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Mr. Chairman, I thought you gave an eloquent case for easing today, and I really thought that's what you were recommending right up until the end of your remarks. I agree with Governor Gramlich that the time has come to go ahead and ease. I also tend to agree with Governor Ferguson in that I doubt that we're going to learn anything very definitive by waiting a little while. And I agree with President Broaddus that when we do ease we need to do so by at least 50 basis points.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. I support your recommendation, Mr. Chairman, and I would remain open minded about whether we will need to react in the intermeeting period or not. But I would caution against responding to what are inherently noisy data—we've had a lot of experience with that—and also against holding ourselves to a standard of previous Greenbook forecasts. I say that because, as Bill Poole mentioned, for the most part the results this year have come out pretty much as expected if one were to put any realistic confidence interval around those forecasts. They certainly have been largely consistent with what I expected for the year as whole when I submitted my forecasts in January and July.

CHAIRMAN GREENSPAN. Governor Bernanke.

MR. BERNANKE. Mr. Chairman, I can support waiting for more information. I'm a little uncertain and confused about the role of geopolitical concerns in the statement. We don't want to tie ourselves to saying that we would act only if certain geopolitical events occur. In particular, if the sluggishness continues but the issue of Iraq is unresolved, would that preclude action?

CHAIRMAN GREENSPAN. I'm merely stipulating my view that, if the corporate governance issue and the geopolitical risks were somehow removed, several things would

happen. The extraordinary pulling back by the corporate community started with the corporate governance issue, whose effect has been very evident and acknowledged by business contacts. But even that did not fully undermine what was a relatively continuous recovery. If business firms change their accounting practices, we get a different view of the world. If on top of that we get considerable uncertainty in the geopolitical area, we are not going to find any economic model that can conceivably capture such a development. In my view, however, it's not something we have to know in advance. We'll know it when we see it. I'm just saying that we ought to be prepared to move before the next meeting in the event that we get significantly negative numbers. I'm not suggesting that the numbers due to come out in the next week or so are necessarily going to be definitive, but I do know that, if this economy is tilting over into a decline, that will be obvious to us in the next three weeks and it will show up in a number of different areas. If it doesn't happen that way, that will mean that the expansion is continuing, and indeed I think the possibility of a lot of momentum when the malaise is lifted is being underestimated. I do not believe that we can effectively make a judgment that economic activity is going to be X percent below potential by the middle or the end of 2003. I don't believe any of our models can even remotely answer that question in a useful way. To be sure, they will generate numbers because that's what models are told to do. But my experience is that such forecasts incorporate the weakest capabilities that economists possess. Once the economy starts to move, it absorbs excess capacity very quickly; and when it starts down, the reverse is also true. The very unusual case is the presumption of an economy that will do nothing, which is essentially what the Greenbook is saying. So I don't think we can look ahead to a simple decision. It is going to be a tough one.

MR. BERNANKE. Mr. Chairman, I appreciate your analysis. I'm just wondering how you're going to get all of that in the statement! [Laughter]

CHAIRMAN GREENSPAN. I wrote it in disappearing ink!

VICE CHAIRMAN MCDONOUGH. May I make a comment?

CHAIRMAN GREENSPAN. Yes.

VICE CHAIRMAN MCDONOUGH. I think there's a little confusion about what we mean when we're talking about the importance of geopolitical events. It's not as if we mean that a geopolitical event is, say, that we start bombing Iraq three or four weeks from now. Maybe we will, and maybe we won't. Rather, the point is what the geopolitical environment does to the level of uncertainty and the effects of that on the real economy. That's a lot easier to convey in a couple of words in the statement.

CHAIRMAN GREENSPAN. If somebody could tell me that we were going to invade Iraq tomorrow, the uncertainty would disappear. Look, our experience with the Gulf War is that the maximum negative effects of the Gulf War occurred immediately subsequent to the invasion of Kuwait by Iraq. It dissolved after the first two or three months, but it was pretty fierce in the early stages.

VICE CHAIRMAN MCDONOUGH. Are we ready to vote?

CHAIRMAN GREENSPAN. We're ready to vote. Would you read the appropriate statement, Mr. Secretary?

MR. BERNARD. I'll be reading from page 13 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 1¾ percent.”

For the balance of risk sentence in the press release: “Against the background of its long-run goals of price stability and sustainable economic growth and of the information currently available, the Committee believes that the risks continue to be weighted mainly toward conditions that may generate economic weakness in the foreseeable future.”

CHAIRMAN GREENSPAN. Call the roll please.

MR. BERNARD.

Chairman Greenspan	Yes
Vice Chairman McDonough	Yes
Governor Bernanke	Yes
Governor Bies	Yes
Governor Ferguson	Yes
Governor Gramlich	No
President Jordan	Yes
Governor Kohn	Yes
President McTeer	No
Governor Olson	Yes
President Santomero	Yes
President Stern	Yes

CHAIRMAN GREENSPAN. Okay. Would you distribute the proposed language of the press statement?

VICE CHAIRMAN MCDONOUGH. All this silence suggests agreement.

CHAIRMAN GREENSPAN. People haven't read it yet!

VICE CHAIRMAN MCDONOUGH. They read fast.

CHAIRMAN GREENSPAN. What we have tried to do in the statement, basically, is to capture the tone of this meeting and to relate it to the previous statement. As you can see, it's restructured from the August statement, but the only thing that's new in it is the reference to geopolitical risks. Is this okay with everybody as it stands? Let me remind those of you who

dissented that we have a new policy now regarding the disclosure of dissenting votes. We are going to state not only who dissented but also what the reasons were for any dissent.

MR. KOHN. Not the reasons but what the dissenter would have preferred to do.

MR. REINHART. The direction of the policy they would prefer.

CHAIRMAN GREENSPAN. Yes, of course, that's right. It's the direction they would have preferred. But I think we all agreed that discussion of those dissents by the dissenters would be inappropriate. The reasons for any dissent would be written subsequently in the minutes of the meeting, which will come out, as you know, immediately after the next meeting. So it would be appreciated if no one gets involved in any discussion of this because I assure you that you will be getting a horrendous number of telephone calls. I would suggest to you that the best thing to do is not to answer them because if you get into any discussion at all you will find that these callers are very experienced journalists and they will get you to say things you had not meant to say. I say that from bitter experience. I decided the only safety valve I had was to marry one! [Laughter]

MS. MINEHAN. Mr. Chairman, may I just say one word about this phrase "owing in part to the emergence of heightened geopolitical risks"? Is this committing us to take a policy action based on something that is happening outside of the United States?

CHAIRMAN GREENSPAN. No.

MS. MINEHAN. If something is done in Iraq?

CHAIRMAN GREENSPAN. No.

MS. MINEHAN. I just worry that that is how it's going to be interpreted. My own sense is that there are a lot broader reasons, even beyond geopolitical risks—and you covered some of them before—for the considerable uncertainty that exists. I think highlighting it this way almost

puts a spin on it that says, in effect, if something happens out there we definitely will do something and if nothing happens out there we won't. And I don't think that was the sense of the Committee.

CHAIRMAN GREENSPAN. Is it interpreted that way?

VICE CHAIRMAN MCDONOUGH. I certainly don't interpret it that way.

MR. PARRY. No. As a matter of fact, I think it's a subset of the broader statement in the first half of the sentence. I don't think of it that way at all.

MS. MINEHAN. All right. I knew I'd be in the minority, but I'm worried about it.

CHAIRMAN GREENSPAN. That's all right. If in fact you are correct, then the statement is wrong. But it says "considerable uncertainty persists . . . owing in part to the emergence . . ." It's the uncertainty that is the critical issue, not the geopolitical risks.

MS. MINEHAN. I know you can read the sentence that way, but I guess I'd feel better if the "in part" clause had something beyond geopolitical risks or if that were just left out and the sentence stopped with the word "employment."

CHAIRMAN GREENSPAN. I think conditions have changed enough that not to acknowledge the geopolitical events in one form or another strikes me as misrepresenting the situation. Let me just ask a more general question. When I accepted three speeches tomorrow in London, only one of them had a question and answer period afterwards and I had intended to answer only questions regarding corporate governance and other nonmonetary policy issues. Having heard the discussion here, it might not be a bad idea if I spent a little time on the oil price issue and its implications and a few other matters related to the outlook without specifying one way or the other how we should act. I say that because, in the event we decide to move, it

wouldn't be half bad if some of those points have been made and then a move won't come as a particular shock. What's the recommendation of Committee members?

VICE CHAIRMAN MCDONOUGH. My view is that it's not just not half bad, it's essential that you do that. I think we need to prepare the market for the possibility, not the certainty, that we may make a move.

MR. MOSKOW. I don't think you should ever be restricted from talking about monetary policy after a meeting for some artificial time period that we've predetermined. I think your commenting as you suggest would be good.

CHAIRMAN GREENSPAN. Does anybody else have anything to add? Bill.

MR. POOLE. I would just comment that there is always a risk that something you say will lead people to read between the lines and will raise more questions than you're able to dispose of. That's obviously a risk. I would also say that the two dissents will prepare the market for the possibility of future action, probably in a way that's quite clear and does not raise any other potential problems.

CHAIRMAN GREENSPAN. I agree with that.

MR. HOENIG. Mr. Chairman, I think you should be prepared and willing to take questions. I think it serves a useful purpose of providing information. Obviously someone could take what you say the wrong way, but that's going to happen regardless. I think you'll do more good than harm.

CHAIRMAN GREENSPAN. Does anybody else have any recommendations?

MR. MCTEER. I agree with Tom Hoenig.

MR. STERN. I agree with him, too; more communication is better than less.

MR. OLSON. My sense is that the less said in this press statement the fewer questions we'll have, but you can clarify any questions in a dialogue type of environment in a way that we can't do in a statement.

CHAIRMAN GREENSPAN. Okay, I'll try my best. I can't guarantee that what I say will always come out the way I want it to. But I've been around long enough that I can put more words into fewer ideas than anyone else I know! [Laughter]

VICE CHAIRMAN MCDONOUGH. We all agree that you have a unique talent in that regard.

CHAIRMAN GREENSPAN. Thanks a lot!

MR. MOSKOW. But, Mr. Chairman, you'll be speaking in a foreign language there!

CHAIRMAN GREENSPAN. Is there anything else on the agenda that we need to discuss?

SPEAKER (?). Lunch!

CHAIRMAN GREENSPAN. The next meeting is Wednesday, November 6, the day after Election Day. If it were the day before, we'd have a problem.

END OF MEETING