

**Meeting of the Federal Open Market Committee on  
March 19, 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, March 19, 2002, at 9:00 a.m. Those present were the following:

Mr. Greenspan, Chairman  
Mr. McDonough, Vice Chairman  
Ms. Bies  
Mr. Ferguson  
Mr. Gramlich  
Mr. Jordan  
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. Kohn, Secretary and Economist  
Mr. Bernard, Deputy Secretary  
Mr. Gillum, Assistant Secretary  
Ms. Smith, Assistant Secretary  
Mr. Mattingly, General Counsel  
Ms. Johnson, Economist  
Mr. Reinhart, Economist  
Mr. Stockton, Economist

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

Mr. Kos, Manager, System Open Market Account

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

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

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

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

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

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

Ms. Low, Open Market Secretariat Assistant, Office of Board Members,  
Board of Governors

Ms. Pianalto and Mr. Stewart, First Vice Presidents, Federal Reserve  
Banks of Cleveland and New York respectively

Messrs. Beebe, Eisenbeis, Fuhrer, Goodfriend, Hakkio, Hunter, and  
Rasche, Senior Vice Presidents, Federal Reserve Banks of San Francisco,  
Atlanta, Boston, Richmond, Kansas City, Chicago, and St. Louis  
respectively

Ms. Hargraves, Vice President, Federal Reserve Bank of New York

**Transcript of the Federal Open Market Committee Meeting on  
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CHAIRMAN GREENSPAN. Good morning, everyone. Would somebody like to move approval of the minutes of our January 29-30 meeting?

VICE CHAIRMAN MCDONOUGH. So move.

CHAIRMAN GREENSPAN. Without objection, they are approved. Mr. Kos.

MR. KOS.<sup>1</sup> Thank you, Mr. Chairman. I will be referring to the set of charts that has been distributed. In the top panel on the first page, U.S. cash and forward deposit rates are shown in red. The forward rates—the dashed red lines—moved higher in a more pronounced manner after a string of stronger-than-expected economic data and Chairman Greenspan's Senate appearance on March 7. The three-month forward rate is trading at 2½ percent, about ½ percentage point above the cash rate, and the nine-month forward rate rose nearly a full percentage point in the past five weeks or so to almost 4 percent. European rates, the green lines, showed the same general pattern though not to the same degree as U.S. rates. Traders apparently believe that European interest rates, which did not fall as much as U.S. rates did in 2001, will not rise as much in 2002. Japanese interest rates stayed low, and the Bank of Japan continued to provide significant liquidity to the yen money market. As we approach the end of the fiscal year, there is no hint of a Japanese premium in yen money markets and only a very slight premium that shows up periodically in dollar money markets—at least based on traditional indicators such as the British Bankers Association poll. However, market reports suggest that unsecured lending to Japanese banks has been scaled back significantly. Meanwhile, Japanese banks have resorted to raising dollars via foreign exchange swaps with non-Japanese banks wherein they are swapping in dollars in exchange for yen. The foreign banks doing these trades are able to raise the yen at negative interest rates, so even if invested at a zero interest rate they can earn a positive spread.

Turning to page 2, Treasury yields began to rise in late February in response to the same factors that moved short-term interest rates. From February 26 through yesterday, the two-year yield rose about 60 basis points. And the spread of the two-year note over the fed funds target was at 185 basis points yesterday, the highest spread in that relationship since January 1995. Similarly, the spread between the ten-year note and the fed funds target was 355 basis points, the widest since May 1994. Finally, the spread between the thirty-year bond—or I should say the twenty-nine-year bond—and the target fed funds rate was just shy of 400 basis points, the widest since May 1993. In the private sector, accounting and disclosure issues hung over the corporate market during much of the period and securities of individual firms were periodically repriced. But spreads as a whole were steady or even narrowed slightly.

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

The spread of the BBB over the AAA yields bounced around as rumors hit specific names or sectors, but on balance it hovered near 125 basis points. As shown by the solid blue line, the spread between A and AAA yields actually narrowed somewhat during the period. The trend of narrowing spreads is more pronounced in the lower quality sectors of emerging-market debt and high-yield markets. Both the EMBI+ and the Merrill Lynch high-yield indexes narrowed dramatically, as investors' risk appetite seemed to revive and they priced in increasing odds of a global recovery. The Merrill Lynch high-yield spread narrowed to its lowest level since September 2000, and the EMBI+ spread narrowed to its tightest level since July 1998, but the recent recomposition of the EMBI index exaggerates the scale of that improvement.

Turning to page 3, volatility trends in major asset markets are shown in the top panel. The S&P 100 Volatility Index, also known as the VIX, has been declining for some weeks now into the low 20s—at the lower end of its range of the last six or seven years of 20 to 35 or 40 percent. In general, high levels have been associated with periods of stress and falling equity prices. Some analysts have asserted that the current level of implied volatility suggests a complacent attitude among investors. Others, however, note that equity volatility above 20 percent is a relatively recent phenomenon; before 1995 equity volatilities were frequently in the 10 to 15 percent range. These analysts suggest that, with the boom and bust behind us, a period of more-modest returns may be consistent with a reversion toward lower volatilities. The middle panel graphs the implied volatility of the Eurodollar interest rate futures contract. That volatility had stayed at a high level in the months after September 11 but recently has declined to its lowest level since that date, though it remains at elevated levels compared with its historical average. Finally, the bottom panel depicts the one- and twelve-month implied volatilities in the euro-dollar exchange rate. With that exchange rate trading in a fairly narrow range between 0.86 and 0.89, the volatility has eased into single digits, and the one-year implied volatility is at its lowest point since November 1999.

Turning to page 4, let me say a few words on Japan and Japanese assets. The yen, which had been exhibiting weakness early in 2002, had a dramatic about-face starting in mid to late February. For most of January and part of February the talk in markets was about the possibility of a major crisis around the end of the fiscal year. This led to a “sell Japan” mentality and the prices of equities, JGBs, and the value of the yen all declined. As the talk about the crisis swelled, markets began to look forward to two events in late February—the release of the government's “anti-deflation plan” due to come out on February 27 and the Bank of Japan's policy board meeting on February 28. In the event, the government's anti-deflation plan was leaked slowly in the days before its release, and it contained little that was new or viewed as being truly helpful in fighting deflation. The one concrete step was a tightening of short selling rules on equities. This was coupled with the announcement—a few days before the plan was released—of sanctions by the FSA against four foreign firms for violating the then-existing short selling rules. Between aggressive buying by public pension funds and a short covering rally, the Nikkei rose about 26 percent from its low in early February to its peak in early March. On February 28 the Bank of Japan's

policy board, under severe pressure from the government, decided to increase the pace of its JGB acquisitions from ¥800 billion to ¥1 trillion per month. JGB yields declined 10 basis points in the three weeks after that, to about 1.45 percent. With Japanese asset prices rising, the yen appreciated sharply in late February, though it has depreciated to a level of about 1.31 in the past day or so.

Turning to page 5, a word on domestic reserves management. The top chart shows monthly rates of growth in currency over the past year and our forecast for the next few months. Currency growth has been well above trend in many recent months. Late last year, just when it looked as if it was getting back to normal, we experienced unexpectedly rapid growth for several months. Argentina has been part of the story, but domestic demand for currency has also been strong. The bottom panel shows, by maintenance periods, the aggregate size of domestic financial assets held by the Federal Reserve. The gray line represents our permanent SOMA holdings, and the red line shows total holdings, including repurchase agreements, both long and short term. Aggregate holdings will simply reflect the behavior of autonomous factors and demands for Fed balances. The underlying changes in this series over time mostly reflect currency growth. The size of our total RP holdings rose quite suddenly in the aftermath of September 11, as we stopped our outright activity for a few maintenance periods while currency growth remained robust. Total RPs grew to more than \$30 billion, and the long-term RP book reached about \$24 billion in October. In that month we began to buy outright for SOMA once again; and over the past five months, SOMA has expanded by over \$25 billion, which in absolute terms is about as aggressive a pace as we have ever sustained over any extended period. But the rapid growth in currency has continued to surprise us over the past several months, and the rapid pace of SOMA expansion still has not allowed us to bring down our holdings of RPs, including long-term RPs, below the October levels. Looking ahead, while currency growth is expected to moderate, we plan to maintain the recent rapid pace of SOMA expansion, which should allow us to bring RPs, including long-term RPs, down modestly from the current levels. Again, though, we are talking about forecasts, and there is a lot of risk to those forecasts.

Mr. Chairman, there were no foreign operations in the intermeeting period. I do want to mention that yesterday the Desk made its initial purchase of French bonds for SOMA's foreign portfolio as part of our effort to diversify the Euro portfolio beyond German debt. I will need a vote to ratify domestic operations, and I would be happy to answer any questions. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. How do you read the Argentinean situation? It seems to be going from one state of deterioration to the next, with the clues largely being some form of confiscation of foreign assets. That leads me to conclude that it will be difficult to get anyone to reinvest in Argentina if its leaders continue to make it terribly obvious that it's not safe to do so.

How much is the exchange rate being suppressed by the lack of a fully free market there? And how is this all going to unravel or ravel—I don't know what the appropriate term is—in your judgment?

MR. KOS. I think you're absolutely right that there is a suppression of the exchange rate by the various rules and regulations, both formal and informal, that are being applied. How much that is suppressing the exchange rate is hard to quantify, and I wouldn't want to hazard a guess. But a lot of people in the analytical community think that we could see a further—and perhaps even sharp—depreciation if and when a more open market is allowed to develop. As for how that will spill over into broader markets or the society, I think it's very hard to guess. But it's difficult to be optimistic about the situation.

MS. JOHNSON. If I may interject, Mr. Chairman? I would note that the one-year forward rate yesterday was 4.8 pesos per dollar.

CHAIRMAN GREENSPAN. I was just about to mention that. In other words, somebody is very pessimistic at this point. What in the world does a one-year forward of, say, 5 imply about the inflation rate? We had the Brazilian experience where we were all surprised at the lack of pass-through of the exchange rate effects. Do we have any evidence yet as to how this is materializing in the Argentine situation? We do know that their inflation rate is rising, but is it rising with the implied full, moderate, or very little pass-through of the exchange rate depreciation?

MS. JOHNSON. There's not enough economic activity going on in Argentina to know—even in domestic trading much less anything that would involve the purchase of imported goods and the reaction of wages or the pass-through or any of that. Ironically, the situation is so bad that it may be that what they really should do is let the inflation rip because it would depreciate

the real value of outstanding debts that they can't pay. The stress of trying to protect value and pay those debts underlies many of their political problems. I don't know, frankly, anything to suggest to them. If you sent me down there as the Czar of Argentina, I would not know how to fix the present situation.

CHAIRMAN GREENSPAN. Heaven forfend!

MS. JOHNSON. The IMF task force that was there has gone home. They were subject to immense scrutiny in the Argentine press. Even people on the street knew the names of those on the IMF task force, which is something that is very unusual. The government in power now continues to blame others for their problems. They blame past IMF policies; they blame foreign lenders; they blame the foreign banks. They blame anybody but themselves. The public has lost confidence in most institutions. It's not clear whether they've lost confidence in the central bank. But the central bank is in a very difficult position because if they try now to keep the inflation rate contained, then this device of basically wiping the slate clean and starting over by just letting the inflation rip won't happen. And the political struggle to fight over the crumbs that are left will continue. So in some respects, as outrageous as it may sound, it might be better if the central bank just looked the other way for a while.

CHAIRMAN GREENSPAN. On second thought, maybe we ought to send you down there! [Laughter]

MR. PARRY. Isn't a lot of the debt denominated in dollars?

MS. JOHNSON. Oh, it used to be. It isn't any more. By a stroke of the pen, they have "pesofied" virtually everything. They cannot do that to the debt they owe to foreigners because foreigners basically will just say "no."

MR. PARRY. Right.

MS. JOHNSON. But anything that is circulating internally has been pesofied.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. If I could make a comment, Mr. Chairman? Roger Ferguson and I attended a meeting of leading private-sector bankers and central bankers in Basel a couple of weeks ago. When the subject turned to Argentina, it was the most fascinating experience I've ever had in that there was absolute agreement between the public-sector and the private-sector participants. All agreed that the main issue was the grotesque violation of any concept of the rule of law by that which passes for a government in Argentina. There was no pressure whatsoever from the private sector for a public-sector rescue package. Rather, the contrary: We were being very strongly advised not to touch Argentina with a helping hand of any kind because of a new version of the contagion effect. That is, if a country could in any way be rewarded for violating the law of contracts, it would encourage irresponsible governments elsewhere in the world to think that they should do the same thing. So there is, I believe, a view that the present government of Argentina just has to be allowed to stew in its juice until and if it figures out a way to implement a program, which would include putting back in place the rule of law. And I think the ability of the present government to do that is questionable. I must say that, in my forty years of working on these types of problems and working with Argentina, this is the most difficult situation I've ever seen. That's because not just Karen but nobody can figure out what to do. The Argentine people have a view that their politicians are either inept or corrupt or both, and by and large they are right. Therefore, no one can quite figure out how Argentina can get out of this situation.

CHAIRMAN GREENSPAN. Jerry.

MR. JORDAN. I attended a meeting a couple of weeks ago at which Anne Krueger was present as was Ricardo Lopez-Murphy, who was the Argentine Defense Minister and then for a couple of weeks the Minister of the Economy. On the inflation question, Sebastian Edwards made some back-of-the-envelope calculations. These numbers to me just sound off the wall, but he said it would take about a 3,000 percent inflation in peso terms to get some sort of a balance. I don't know how he arrived at that figure, but the numbers being talked about were just enormous. Ricardo Lopez-Murphy's point was that the attitude in Argentina now is more like that in the French Revolution than anything any nation has experienced since then. He said that in the mind of the average Argentinean, if you have ever held political office in Argentina, you are not qualified to hold office.

VICE CHAIRMAN MCDONOUGH. Sad stuff.

CHAIRMAN GREENSPAN. It's not very encouraging. Incidentally, on the currency issue, when we subtract out the estimated change in dollars held by foreign holders, what have the domestic currency trends looked like in the last two or three months?

MR. REINHART. Actually, Mr. Chairman, it's a pretty easy calculation because foreign and domestic holdings seem to be growing at just about the same rate.

CHAIRMAN GREENSPAN. That doesn't make it an easy calculation. It may just be wrong! [Laughter]

MR. REINHART. As we estimated it, the growth rates were similar. Looking at currency shipments in January, overseas and domestic holdings were both growing at 12 percent. In February it was about 8½ percent for overseas and 13 percent for domestic.

CHAIRMAN GREENSPAN. I assume \$100 bills would move in pretty much the same way?

MR. REINHART. That's in part how we get the numbers. It's one way of estimating this number; we look at that and the data we get from currency shippers.

CHAIRMAN GREENSPAN. Okay. Any further questions? If not—

VICE CHAIRMAN MCDONOUGH. I move approval of the domestic operations.

SPEAKER(?). Second.

CHAIRMAN GREENSPAN. Thank you. Without objection, they are approved. Dino you're still on. You're going to talk about GNMA's (Ginnie Maes), right?

MR. KOS. Yes. Don and I will make some brief opening comments on that topic. At this point the staff has done a fair amount of background work on how we might go about acquiring for the System Open Market Account a portfolio of GNMA's and also on structuring a portfolio of RPs (repurchase agreements) against foreign sovereign securities. Where we are now is that quite a bit more—in fact a substantial amount—of rather nitty-gritty operational work needs to be done both to study and to prepare for an actual implementation of either program. That then becomes a resource issue because a lot of the same people would work on both of these projects. So there's a competition for those resources between these two projects and also on the contingency-related issues. And that just makes it impossible for us to expedite the contingency planning work and also work on GNMA's and the foreign sovereign debt. Therefore, we wanted to get some guidance from the Committee as to which one of the two options for the portfolio the Committee wanted us to focus on. There are pros and cons for each, which we tried to lay out in the paper that was sent to you. As we noted in that memo, there are both tactical and strategic questions that the Committee may want to consider. Don and I would be happy to answer any questions, but I won't review the actual contents of that paper. Don, did you want to say anything about some of the other topics on which staff work is being done?

MR. KOHN. Yes, I just want to bring the Committee up to date on other work under way. We have a study being done on the auction credit facility (ACF), which would be a discount window facility. Rick Lang from the Philadelphia Fed is heading that up and is following up on the various issues Committee members raised when this subject was discussed about a year ago. There are issues dealing with supervisory matters, risk management and asset management for the Federal Reserve System, and auction design. Those are at least three of the main topics being studied. That work actually has been given a little extra impetus by contingency planning follow-up from September 11. An ACF-like facility could function in an emergency as a backup for open market operations. As a consequence of Governor Ferguson's and Vice Chairman McDonough's work on contingency planning and backup facilities for the System, we have given that ACF study a little more urgency. Rick and his group are to have something done on that by June. If they can't get a complete study done on all aspects of the ACF, they are at least going to have finished by June the work on the use of a discount auction facility as a contingency backup for open market operations. But Rick is going to try to move along all the tracks so that we can have everything regarding the ACF ready for consideration at that time.

A second project is the review of the SOMA studies that you looked at a year ago. Each one has been reviewed by legal staff both here and at the New York Fed, I believe. For the most part, they have also been through the economic editing process to get them ready for publication, and the authors themselves have reviewed that work. I think it's fair to say that the urgency behind this project has toned down a bit. But we are moving forward to get those studies in publishable form and to get them out to the public as staff studies, not as Committee documents.

CHAIRMAN GREENSPAN. It strikes me that, if you're pressing on staff resources, the most difficult option in terms of the bridge necessary to get political and public acceptability is the use of foreign debt obligations. Unless someone has a differing view, it seems to me that we can certainly proceed with the Ginnie Maes before we can go forward with the foreign sovereign debt option. I don't know whether or not that's a consensus view.

VICE CHAIRMAN MCDONOUGH. I agree fully. And New York would have the staff do them both after we have finished the contingency work.

CHAIRMAN GREENSPAN. Yes. President Broadus.

MR. BROADDUS. Mr. Chairman, if I could just make a couple of comments here. I certainly think these studies are useful and worthwhile. If we get to the point that we don't have enough Treasury securities out there to do our job, it's going to be helpful to have done these studies and given some thought to these alternatives in advance. So I consider it a useful exercise. But I do have problems with both of the alternatives that are before us this morning. I agree with what you just said about using foreign government securities as collateral for repos. I think that could be very politically sensitive and this is at a time when we're trying to put together and maintain a coalition to fight terrorism around the world.

The Ginnie Mae option may seem better at first glance, even taking account of the size of the market and questions about liquidity and whatnot. After all, they do carry the full faith and credit of the U.S. government. But when I think about it, that may not be all that helpful in some sense. The loans we made a number of years ago to Chrysler and to Lockheed also carried the full faith and credit of the U.S. government. It worries me that we might set up a precedent or convey the idea by dealing in GNMA's that in some sense full faith and credit is a sufficient condition to hold securities or other kinds of assets in our SOMA portfolio. If that is the message

conveyed, then I think there's a possibility that in the future, when some other Chrysler-like debt comes down the road, we might have to say yea or nay as to whether we're going to hold that particular asset. I can imagine that that could put us in an uncomfortable position.

Moreover, buying GNMA's themselves would pose problems. If we're willing to buy securities that support housing, then someone is going to ask why shouldn't we buy securities to support some other activity that the government thinks is worthy of the full faith and credit designation. Now, one might ask, Well, if the Treasury is willing to make that designation, why should we be worried about it? But to me, in this situation, perception is reality. If we're perceived as being a part of some sectoral credit-allocation process, then in my view that could be problematic for us, and I think we ought to avoid that.

So I come back to something I tried to sell a while ago and didn't have much luck. My suggestion is that we find a way—or at least discuss with the Treasury the possibility of finding a way—for them to increase the supply of Treasury securities for us to purchase if that need arises. I know this is a tough sell. But we're doing all these studies of other options, many of which—or perhaps all of which—arguably are not all that attractive. So I just wonder if we couldn't spend a little time and effort to try to talk with Peter Fisher or whoever is the right person at the Treasury to explore whether this concept might be feasible. I just throw that out as a suggestion. This will probably be my last speech about this, but I really have problems with these other options.

CHAIRMAN GREENSPAN. Well, I think we all have problems with them. They are not options we have chosen to implement over the years, and the reasons are largely the issues that you've raised. These are fallback positions "in the event that." And the "that" may not emerge, judging from the most recent fiscal policy stances. So it may be a moot question. But I

think all that Dino and the others need to know at this point is, given the alternatives of a series of not currently acceptable SOMA investments, which is the least worst.

MR. BROADDUS. All I'm asking is that this one other option be put on the plate and given some time and consideration.

CHAIRMAN GREENSPAN. Can we have comments on that? I'm just curious to hear, say, Dino and Don's comments on that issue.

MR. KOHN. I think there are a couple of issues involved, if I can dredge them up from my memory of our previous discussion. Part of the question was what the Treasury would do with the other part of its balance sheet. In effect, we'd be pushing the problem on to them. That may be where it belongs, but I think it would require a change in their law. As for us, we have to buy our securities in the open market. So this is a question of the Treasury's issuing more securities into the open market to accommodate our needs and then doing something with the cash that they raise. They would need to figure out how to invest the extra cash that they're raising in order to sell the securities in the open market or we, in addition to the Treasury, would need to go to the Congress to seek a change in the law.

MR. BROADDUS. Well, I'm sure there are challenges and issues and mechanical questions to deal with. But that is the case with all of these other options. All I'm saying is that I hate to see this possibility get dismissed pretty much out of hand.

CHAIRMAN GREENSPAN. Suppose they invested the cash in common stock, would you be appreciative of that?

MR. BROADDUS. Well, that's their business, I guess.

MR. KOHN. Mr. Chairman, working with Al and his people, we can certainly produce a short paper on this topic. Marvin Goodfriend and I had a debate about it at the Cleveland Fed

last fall. We can convert our debate to a paper to bring to the Committee in a couple of months if that would be helpful.

CHAIRMAN GREENSPAN. Okay. President Poole.

MR. POOLE. I have a question, and it's purely a question. Given that there has been some discussion about the condition of FNMA (Fannie Mae) and FMAC (Freddie Mac), would a visible program to make possible investment in GNMA securities raise issues about why we are not investing in those of Fannie and Freddie? Would there be a possible adverse market reaction as a consequence? This is along the same lines as Al's question. If we're getting involved in housing, why not invest in Fannies and Freddie's? I'm also thinking about the riskiness of Fannie Mae and Freddie Mac—the very low capital ratios that those firms maintain.

MR. KOHN. We take Fannies and Freddie's in RPs. This option would involve outright purchases of GNMA's, so we would be treating them differently. I think we would explain the difference as a full faith and credit issue. Part of the idea for moving to GNMA was that the Committee seemed not to want to increase its reliance on Fannie and Freddie. And one of the instructions to the staff was to look for other alternatives that are legal under the current Federal Reserve Act. That's how these alternatives came up. So I think the signal you're seeing is an accurate representation of where the Committee wanted to go.

If I could make one more point, going back to the question you asked about currency growth, Mr. Chairman. Currency has been growing about 8 percent a year; this year it's been running more like 10, 11, 12 percent. The deficit would have to be \$250 billion or \$300 billion for us not to be taking an increasing portion of the securities outstanding. So even without the adverse deficit kinds of scenarios that people see, if currency growth doesn't decelerate soon, the Fed will start to own a rising proportion of the Treasury securities outstanding in a market where

in certain sectors the liquidity issue is already surfacing. We can obviously do a lot more study on this. But even under the most likely scenarios of deficits persisting at a relatively low level for some time, I think the Committee is going to face a problem where its operations are impinging on the liquidity of the market before too long.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. My issue was similar to Bill Poole's. I'm concerned about getting involved with GNMA's because of what that may lead to with regard to the pressure to make outright purchases of Fannies and Freddie's, which I think would be a huge mistake. So despite all the imperfections, if I had to vote, I would vote in favor of looking at the foreign RP pool first.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. First, Al's comment about his last speech on this subject reminds me of a story from twenty-odd years ago in the banking industry. The question from one banker would be, "Have you seen Sandy Rose's last article on duration?" And the response would be, "I hope so!" [Laughter] This story does relate to GNMA's because I was opposed to dabbling around with them even before I read Sandy and Brian's memo, and they thoroughly convinced me that it is a bad idea. In addition to prepayment risk, which is adequately treated in the memo, there is also the risk of shortening duration and revaluation in a rising rate environment. I also think there is the issue of how we would subsequently distinguish between them and GSEs. So my first option might be, other things held aside, to table this whole issue. That is probably not realistic in view of the length of time it will take to come up with a viable alternative if necessary. I do think a connection ultimately needs to be made between what is on the liability side of our balance sheet, in terms of where and how it's held, and what is on the

asset side. So I would support going ahead and devoting whatever resources are available to exploring the use of repos in foreign-denominated currencies. I think that's a sensible thing to think about for a long-term perspective.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. I think we're all going on memory here. First, I would say that I don't have a particular preference for foreign RPs versus Ginnie Maes; I could go either way. But on the Ginnie versus Fannie/Freddie issue, I believe the distinction is that at one point Fannie and Freddie were explicitly privatized. They were supposedly taken out of the government and were not supposed to receive any public subsidy. So we are adhering to that line. That privatization decision, as I understand it, was not made for GNMA. So I see a clear distinction there. One might argue that there are going to be pressures, and that may be so. But I think that argument could be turned around a bit to say that, if we explicitly operated in Ginnies and not Fannies and gave the reason, it might actually clarify the distinction between what is supposedly privatized and what is not. The last point is on Al's idea of talking to Peter Fisher. I'd be happy for us to have a conversation with Peter Fisher. But even though Peter is wonderful, he's not a magician. The only way the Treasury could issue us more securities or put more securities out in the market for us to buy is for them to run deficits or buy assets. And I don't find either option attractive. We can have a paper on this, but what else is it going to say? So I guess, Al, I do hope that this is the last conversation we have about that! [Laughter]

MR. BROADDUS. Well, they don't just have to buy assets. They can always reduce taxes. This doesn't constrain fiscal policy.

MR. GRAMLICH. But that means a deficit. That's the deficit option. Whatever you think about deficits, I believe that ought to be part of an overall fiscal strategy. And I don't want

to have the Treasury changing that strategy just so we can do something that's a second-order improvement in monetary policy. I just don't think it's worth that.

CHAIRMAN GREENSPAN. I guess we ought to buy the Washington Senators!

MR. GRAMLICH. Or the Treasury could buy them and issue us a security. [Laughter]  
That I might go along with!

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. I believe there's no easy answer to the question that is being raised by the Desk. If we look at the data on outstandings, that should be obvious. Once one moves away from Treasuries, what's left are corporates, agencies, mortgage-based paper of various kinds, and foreign securities—or at least foreign sovereign debt based assets. Municipal securities were never a real alternative, given the limited size and depth of that market. If we eschew credit risk and we shy away from GSEs, we're left with Ginnies and foreign sovereign debt based assets. The staff has laid out the right issues here.

Maintaining a GNMA portfolio is work that involves special skills. These skills aren't difficult to find, nor are they difficult for the Desk to acquire. The Desk could, in fact, maintain a portfolio of mortgage-backed instruments. The industry that we regulate has thousands of its members engaged in that activity as we speak, and given that our interest is limited to portfolio investment rather than trading, it's really pretty simple to accomplish. Alternatively, shifting to dollar RPs against foreign sovereign securities would appear to be an easier option. The Desk is already involved in RP transactions, and so allowing sovereign collateral seems like an easy step.

From a conceptual point of view this is correct. However, as the staff memo indicates, the market for cross-currency repos is currently quite small. We in essence would need to create a market or, as the memo states, create a more vibrant market out of one that is indeed quite

small. I have great reluctance to do so for two reasons. First, we would have to define countries whose sovereign debt was acceptable to serve as collateral in transactions with the Federal Reserve. And we'd have to maintain such a list. More to the point, we would have to be prepared to remove from our list a country whose fundamental creditworthiness had changed substantially. This would be awkward at best and potentially politically difficult. Second, it's not at all clear to me that the Federal Reserve should be placed in the role of market creator. We currently worry, appropriately, about disrupting markets with our trades. Why should we be willing to create new markets? Clearly, if the Desk indicated that it would be trading in such cross-currency instruments, the market would develop. But this would change spreads and alter the status quo in uncertain ways. I'm not sure that this is an appropriate role for the Federal Reserve to play in world capital markets.

In fact, I more or less come to the conclusion that maybe we should slow this effort down. I hesitate to say this. It took us almost a year to get to this point. But the Treasury seems to have shifted its spending outlook, as we indicated, and maybe not enough by the back-of-the-envelope calculations. But at least at the moment that has given us some breathing room. And as was mentioned at the outset, the auction credit facility seems to have some promise if we in fact proceed with it. If we must act, I guess I'd favor the GNMA's. And as a side bar, there are lots of MBAs out there who would be happy to run that portfolio for us. Given the weakness in the labor market, there are probably plenty available at the moment. Those are my comments.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Thank you, Mr. Chairman. I associate myself very substantially with what President Santomero has just said. I think the GNMA's are preferable to the repos with foreign sovereign debt collateral for the reasons that he cited. I also

would like to remind us of the resource constraint. The limited number of people who can work on this issue have been working flat out since September 11, and they were working pretty hard before that. So I think the first order of business really is that they finish the work on the contingency issues and relax on all of this other material until then, which would probably be a matter of, say, three to six months. At that point I think they should concentrate their efforts on GNMA's. I agree that management of GNMA's would be somewhat more complicated than managing what is in the portfolio now, but it is certainly doable. As President Santomero said, many firms that we supervise do that sort of work very extensively.

I also believe that we have to avoid getting into the situation of saying that we will decide which securities are acceptable if they have the full faith and credit of the government of the United States. If the Congress and the President decide that an instrument has the government's full faith and credit, it is not altogether clear to me that, as a creature of the Congress and as an independent central bank, we should second-guess that decision. It isn't at all clear to me what would give us the authority to decide—to make the highly political judgment—that pure Treasuries are okay but GNMA's or something else are not. It is nice that we have been able to deal with pure Treasuries until now. As Don Kohn points out very well, even if deficits continue, the trends are such that we're going to have to make use of securities other than pure Treasuries. I think what the Congress and the President decide has the full faith and credit of the United States is clearly the right place to go. And if they decide that some other kind of credit has the full faith and credit of the United States, we may have to go there, too. Thank you.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Well, if you wait long enough to speak, somebody says all the good stuff! I must associate myself with the views of President Santomero and Vice Chairman

McDonough on this. I would also encourage us to get the work done on the contingency plans sooner rather than later. It's too easy as time goes by to let things slide. The further we get away from a tragedy in this case, the easier it is to forget about all the bells and whistles that need to be included so that we can react in a timely way if, God forbid, something else happens. Let's get that work done and then work on these other issues in the future.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. I'll be the fourth in a row, so I'll be even briefer than President Minehan and say that I agree with what Tony Santomero, Bill McDonough, and Cathy Minehan have just said. Particularly since my name is somewhat associated with this contingency planning, I don't want anything to stand in the way of getting that done. We'd be extraordinarily embarrassed if we had to implement some sort of contingency arrangements and discovered that they weren't ready. While these other issues are extremely important and I think we should get back to them, I really do believe from a national interest standpoint that getting the contingency planning done is of primary interest at this stage.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, if my memory serves me right, I think the last time we talked about this I favored as a "least worst" choice going with the Ginnies before going with the foreign sovereign debt. But I have a lot of sympathy for what Al said regarding the downside of the Ginnies. Nevertheless, I still would go in that direction. The one thing that I am concerned about relates to the type of problems that often arise by going ahead piecemeal on something. What I'd like to do is to hold off as long as possible and take a look at all the options again, maybe at our meeting next January. We could have this as a special topic then and look at each of these options together in context. By then perhaps the ACF will be further along and we can

make some comparisons. I'd rather do that than say that the least worst option now is to go with Ginnies and build in that direction only to find that they may not be the best choice in the long run and then try to back out of using them. Other than that, I agree that our work on contingencies has to come first and that we can put this off until that is done, knowing what our risks are and knowing what our least worst choice is after that.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, in spite of their shortcomings as well as their advantages, I think that both alternatives, as well as the ACF, are probably going to have to be arrows in the quiver for SOMA at some point. So at some time in the future, certainly after the contingency studies are completed, I think we ought to proceed. It's not immediately obvious to me which option should be addressed first. I would say, though, that the experience of the last year certainly indicates to us that things can change very dramatically in terms of the fiscal position of the U.S. government as well as what we're seeing with regard to currency. I don't know how cautious we should be. I think we ought to move with good dispatch or aggressively after we've dealt with the contingency issues.

CHAIRMAN GREENSPAN. Governor Bies.

MS. BIES. I agree with what President Santomero said. I am very concerned, and my biggest concern is creating liquidity in a foreign market instrument. From a public policy perspective, when there are liquidity issues in U.S. markets, I think we'd have a real problem answering the question of why we chose to build liquidity in a market for foreign securities. I do believe that the priority should be on the contingency planning, though. We pray that nothing else like September 11 happens again. But with what is going on in the Middle East, I don't

think we can ignore the contingency planning. In my view that should be our immediate concern, and I would feel strongly about putting that at the top of the list.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Mr. Chairman, I agree with what seems to be an emerging consensus that we do the contingency planning first and also with what Tony Santomero, Bill McDonough, and others have said. I just want to reiterate the point that Bill McDonough made. If the Congress designates certain securities as having the full faith and credit of the United States—whether they are GNMA's or securities issued in another Chrysler-type bailout—it's not appropriate for us to distinguish among those securities. Even though we personally may not like the idea of subsidizing one sector or one firm, it is not our role to make such a distinction. It really is a congressional decision. So I would favor going in that direction. I also happen to agree with the point that Ned made about trying to draw a distinction between Fannie and Freddie on the one hand and GNMA on the other. If we ever got to the point where we were purchasing GNMA securities but we made it very clear that we were not purchasing those of Fannie and Freddie, I think that might help educate the public a little more on this issue.

CHAIRMAN GREENSPAN. I think it's important to point out that most of the credit allocation effect occurs with the issuance of the full faith and credit securities, not with their purchase. It's not a question of whether the Fed or somebody else holds them; that is probably worth a couple of basis points at most. The major issue is clearly the designation, for whatever reason, of full faith and credit. So it's the Treasury that is making the crucial decision. What we do with respect to which of those various assets we hold is a very secondary question. There is an issue of principle here, and I think that is something we have to keep in mind. But as a practical matter, I'm not sure it matters all that much. I don't believe, for example, that if we had

held the Chrysler debentures, they would have yielded a significantly different return in the market. It's not a market issue; it's an economic policy issue. And it raises critical issues as to who is making the policy decision—whether we do it or the Treasury does it and so forth.

President Guynn.

MR. GUYNN. Mr. Chairman, just to complete the go-around, let me associate myself with those who have a preference for the GNMA's as opposed to the foreign debt alternative. My staff tells me that we'd be smart in the short run to concentrate on repos, even with Ginnies. Apparently there are some rather difficult accounting issues that need to be explored as far as outright purchases are concerned. So I would put myself in the same camp as others who have taken that position.

MR. KOHN. We already do repos in Ginnies.

MR. GUYNN. I assume that we could do more, as the first cut—do more repos before we do outright purchases.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. I would associate myself with Presidents Santomero, McDonough, and others in wanting to complete the contingency work first and preferring GNMA's over foreign debt. I doubt that we're ever going to need to do this, but maybe we could also buy time by lowering reserve requirements at some point so that the amount of securities in the portfolio will be reduced.

CHAIRMAN GREENSPAN. That would get somebody's attention, I'm sure. Does anybody else want to comment on this?

MR. KOS. Just two brief points. On the question of other assets that have the full faith and credit designation, there is the credit issue and then there's the liquidity issue. So, as we

look at potential assets, the Desk might decide that a particular security meets our credit screen but it might not meet our liquidity screen because not enough of that issue is outstanding. So we wouldn't necessarily automatically be in the posture of buying that asset. On President Santomero's point with respect to the foreign sovereign debt and which countries would be included in the collateral basket, just to be up front I should note that we are in that posture now with our foreign portfolio, where we do maintain a book of euro-denominated repos. At present we take securities of six countries from the euro area that meet our credit and liquidity screens. So we are in that posture now, although it's not as prominent because it is a small portion of our portfolio.

CHAIRMAN GREENSPAN. Let me request that Don Kohn review the transcript of the discussion we've just had. I think it's fairly evident that the contingency planning has first and immediate priority and that there is a mixture of views beyond that. Also, I want to emphasize that this is not an issue on which those who are voting members of the FOMC at this particular meeting should carry the day because this is a much broader question. So I suggest that you look at the full Committee and make judgments accordingly, Don, and if necessary get clarification from the members. Then I would ask that you report your findings to Dino Kos so he will have some answers to his question. Those answers, I trust, will be somewhat less ambiguous than what I heard at the table this morning. I think it was a useful discussion, and implicit in what has been said are some useful insights as to what the next step should be. Unless somebody has anything further to say on this issue, I will call on David Stockton and Karen Johnson.

MR. STOCKTON. Thank you. I noted with some considerable relief the Chairman's remarks at Larry Meyer's going-away dinner in January in which he equated the making of mistakes with the learning experience. While I don't think I would classify the revisions we have made to our forecast as correcting mistakes, I can safely report to the Committee that the staff did have several major learning experiences over the intermeeting period. I thought that perhaps I could review this

morning what it is we think we learned and the implications of those lessons for our forecast going forward.

*Lesson 1: Ask the right question.* You may recall that in December, in defense of our forecast of an upturn in activity this spring, I reported asking the research staff whether there had been any instances of recessions that had failed to end. I now realize that I should have asked the admittedly somewhat more metaphysical question: Are there any examples of recessions that failed to begin? [Laughter] In understanding how things have turned out so much better than our earlier expectations, there is an important question about what kind of cycle we have experienced. One reasonably reliable characteristic of business cycle downturns is that many things tend to go bad simultaneously. In the context of our models, this shows through as a correlation in the errors across spending equations during periods of recession—many categories of spending fall short of the fundamentals for a time. It is precisely this synchronicity of errors that leads to the nonlinearities we associate with recessions. As you know, we had built that feature into our forecast—to a small degree through much of last year and in a more significant manner last fall. In the event, those correlations have largely been absent.

To be sure, the pronounced downturn in spending and profits in the business sector led to weaker growth of employment and income. Spending in the household sector slowed in response to these developments but no more than would have been suggested by the fundamentals. If anything, there appear to have been small positive surprises in our consumption equations over the past few months. Purchases of light motor vehicles remain at elevated levels, even though they have retraced some of the extraordinary spike seen last year. And real PCE outside of motor vehicles advanced at a  $2\frac{1}{4}$  percent annual rate in the fourth quarter, when unemployment was rising sharply, and appears poised to increase at a pace of nearly  $5\frac{1}{2}$  percent this quarter. Similarly, housing construction only edged down last fall and has moved up smartly early this year, only in part because of favorable weather. This surprising strength in the household sector has combined with an earlier end to declining equipment investment and a tapering-off of inventory liquidation to produce a greater pickup in activity than we had earlier anticipated. We have revised up our forecast for the growth of real output in the first half of this year from a 2 percent pace in our January forecast to a rate of more than  $3\frac{1}{2}$  percent in the current projection.

*Lesson 2: When it comes to forecasting productivity, use your imagination not your models.* Starting late last year and into early this year, we were almost continually surprised by the strength in domestic spending. But given the extraordinary weakness in employment and hours worked, we significantly tempered the effect of those stronger spending data on our forecast of GDP. With readings on inventories and international trade yet to come, we thought strong domestic demand was probably being supplied out of inventories or from rising imports, rather than from increased domestic production. In fact, we viewed our January forecast of  $2\frac{3}{4}$  percent at an annual rate for the growth in output per hour in the fourth quarter to be a bold one for a period of purported recession. Obviously, we showed a

significant lack of imagination. Productivity is now estimated to have risen at an annual rate of about 5¼ percent in the final quarter of 2001. And with the latest available data evidencing a similar pattern of strong expenditures and weak hours, our current-quarter projection of growth in real GDP of about 4 percent implies a still stronger increase in productivity of about 5¾ percent.

So what do we make of these readings on productivity? No doubt, there is a significant amount of statistical noise, as there always is, and thus ample reason to discount these figures. However, there also may be some economic reasons why productivity has turned in such a strong performance of late. For one, we weren't the only ones surprised by the strength of final demand over the past four months. Businesses responded swiftly and aggressively to the events of September 11 by cutting payrolls on the expectation that a slump in demand would soon follow. But, with a few exceptions, a sharp pullback in spending never materialized. In order to meet better-than-expected demand, firms appear simply to have squeezed more out of their existing workforces. Caution on the part of businesses still appears to be in evidence. The pace of hiring has remained subdued, and many business people continue to express concern about the outlook. If our interpretation is correct, firms should begin to hire more vigorously as they gain confidence in the staying power and strength of the expansion. We think that process will be gradual, but in the months ahead we expect businesses to increase hours worked more rapidly by lengthening workweeks and adding workers. As hiring catches up over the next couple of quarters to the improvement in production, growth in labor productivity is projected to drop back noticeably.

We also believe, however, that there has been some signal about underlying productivity in the recent data. We boosted our estimate of the growth of structural labor productivity 0.1 percentage point this year and 0.3 percentage point next year reflecting both these recent readings and the improved outlook for capital spending. Given the enormous increases we have seen, there is certainly some risk that we have underreacted to the news about productivity, much as we did during the second half of the 1990s. As we illustrated in a Greenbook simulation, if productivity were to turn out stronger than in our forecast, growth of real GDP would be higher as would corporate profits, and inflation would come in lower. Faster productivity growth probably helps to explain some of the strength in demand over the past year; the fundamentals were better than we had recognized. Going forward, more-rapid growth of productivity provides a lift to expected income gains, with consequences for current spending, especially on durable goods and housing. Thus, these favorable supply-side developments provided another reason for revising up our forecast this round.

*Lesson 3: With regard to fiscal policy, quit while you're ahead.* Over the past thirty years, economists have typically cautioned against the use of activist fiscal policy as a countercyclical tool. The principal shortcoming cited is that it often comes too late and ends up being procyclical rather than countercyclical. The tax cuts enacted last year, however, provided a nice counter-example. We believe the

boost to disposable incomes from the rebates and the cuts in marginal tax rates provided important support to household spending in the second half of the year. Moreover, we expected already enacted legislation—both the second installment of tax reductions and a further step-up in spending—to provide another boost to activity this year.

As you no doubt recall, we had built a fiscal stimulus package into our forecast last fall when employment was collapsing and unemployment was rising steeply. Two key features of that package were extended unemployment insurance benefits and a partial-expensing provision for investment. We then significantly scaled back that package in January, most notably removing the investment incentive, when the economy was showing more convincing signs of a rebound and political gridlock appeared to set in. Well, as our luck would have it, the recently enacted stimulus package was very similar to that which we had incorporated in our forecast last fall. Given the uncertainty that still surrounds the durability and strength of the upturn, reasonable people could come to different conclusions about the advisability of enacting a stimulus package at this point. But viewed from the perspective of our baseline forecast, this package provides a modest positive shove to an economy that would otherwise already have been growing somewhat above trend.

*Lesson 4: Monetary policy still works with long and variable lags.* As you know, we have argued quite strongly over the past year that monetary policy has been and will be effective. By our assessment, easier monetary policy was leaning against substantial drags from the collapse of investment, the weaker stock market, and the stronger dollar. With real interest rates well below estimated equilibrium rates, we thought monetary policy was positioned to encourage a rebound in activity. That now appears to have occurred sooner and with greater vigor than we had projected. As a consequence, we are assuming a steeper upward trajectory for the federal funds rate in this projection than in our previous one. We have penciled in an increase in the funds rate to 4 percent by the end of 2003—100 basis points above our January forecast. This upward adjustment reflects two factors. First, stronger underlying demand and faster growth of structural productivity have boosted our estimate of the equilibrium real rate. Second, with a smaller output gap and a higher path for inflation, the cyclical component of monetary policy does not need to be as accommodative as in our previous forecast. Under our baseline, some additional tightening would probably be required in 2004 to prevent the economy from overshooting.

*Lesson 5: As the education experts often remind us, learning is a lifetime process.* There is little reason to expect that our learning experiences are behind us. As a consequence, it is probably useful to consider where we could be going wrong. We see significant risks on both sides of this projection. One immediate upside risk concerns the behavior of inventories. We have only one month of inventory data for the first quarter, and the figures for that month were stronger than we expected. Even after this morning's trade data, which Karen will be discussing shortly, we'll need to see much greater liquidation outside the auto sector in coming months to get our

forecast of 4 percent GDP growth. The recent upturn in commodity prices could be a reflection of a drop-off in the pace of liquidation or even some re-stocking. That firmness in prices, by lowering the carrying cost of inventories, could also provide some incentive for a more rapid turnaround in the inventory cycle. This would, in turn, provide greater upward impetus to activity, with knock-on effects on production, sales, and spending that could give the economy an even greater head of steam, at least for a time.

There are some clear downside risks as well. We have made a large change to our projection on the basis of just seven weeks of data. And business attitudes don't seem to have improved as much as the economic statistics. Business people apparently don't see the substantial turnaround in corporate profits expected by equity analysts. Even assuming that those rosier profits come to pass, equity valuations still look rich by any historical standard other than that of recent years. The upturn in capital spending isn't a sure thing yet either. The improvement in computer outlays looks to be on reasonably firm ground at this point, but spending for some other types of capital equipment is just now bottoming out and, in a few cases, outlays are still heading lower. Finally, if the recent strength in productivity is all noise and no signal, we have marked up our GDP forecast too much. All in all, the uncertainties in the outlook remain very large. But they now appear to be centered on outcomes that, for the most part, are much better than we could have hoped for not all that long ago. Karen.

MS. JOHNSON. This morning the trade data for January have just been released. These data show a deficit of \$28.5 billion, somewhat wider than in December and than we had incorporated in the Greenbook baseline. Compared with the revised December data, exports of goods and services were about flat. Imports rose somewhat, just about returning to their November level. When translated into real terms, these data on balance do not suggest any significant change to the staff's outlook for growth in the first quarter, as the slightly lower real net exports than we were expecting in the Greenbook might easily be offset by a small change in our forecast for inventories.

In line with the positive shift in the outlook for the U.S. economy in the Greenbook, our forecast for real GDP growth abroad has also been revised up, particularly in the near term. Indeed, to a considerable extent, the more favorable outlook for the rest of the world reflects the more buoyant attitude toward current and prospective activity in the United States. Our optimism, however, is also grounded in information we have recently received about developments in the economies of some of our foreign trading partners plus our expectation that significant monetary ease already in place abroad will stimulate those economies. A rebound in economic activity has come first and most clearly to the emerging-market economies of Asia. This development appears to reflect the start of a turnaround in the global semiconductor industry and the related electronics sector. Production data for the fourth quarter and those indicators that we have in hand for the current quarter confirm that strong gains have been made in those economies that are intensive

producers of high-tech goods. Exports should contribute importantly to sustained, moderate growth in this region over the forecast period; but we look for domestic demand to recover as well. Strong growth of real GDP is projected to continue in China, supported by continued strength in domestic demand and positive developments on the external front.

For the major foreign industrial countries the picture is more mixed. We have already been positively surprised by the strength of production in the fourth quarter in Canada. Of course, the Canadian economy should benefit substantially from the projected U.S. recovery; but we also expect that strong domestic sectors within that economy and the lagged effects of 375 basis points of past monetary policy easing there will be important factors in an acceleration of economic activity going forward. For the euro area, the fourth quarter on average was one of contraction in real GDP. Although there are signs of improved confidence and increasing production in some countries, we remain cautious about the speed with which recovery will occur and so have forecast a gradual return to growth at an annual rate of about 2½ percent in the second half of this year and near 3 percent next year. A more robust global expansion should be good for exports from the euro area, but recovery is likely to boost import growth as well. On balance, we look for domestic demand to grow slightly more rapidly than output during this year and next.

The Japanese economy is once again an exception to the pattern of growth that we see for most of the global economy. To be sure, there have been some positive signs of late. Improved prospects for the rest of the world do imply a better outlook for Japanese export industries, particularly those in the high-tech sector. And the serious collapse of the financial system that some had feared as the end of the current fiscal year approaches now seems unlikely. These developments appear to lie behind the rather dramatic appreciation in some Japanese asset prices that has occurred in recent weeks. But worrisome offsetting factors remain. The banking system still has not resolved its nonperforming loan problem, and its true capital structure is dangerously weak. The inspections now being conducted by the Financial Services Agency will likely refocus attention on these problems once their results are released. Total bankruptcies continue to rise. Domestic demand and recent production indicators show further contraction. Accordingly, we have again written down a forecast of further declines in GDP during most of this year and only weak growth thereafter. In such an environment, deflation should persist throughout the forecast period in Japan.

We have struggled to assess the risks now confronting our Latin American trading partners. Our best judgment currently is that financial markets will continue to distinguish among those countries, particularly in regarding Mexico as more closely tied to the United States and Canada than to its Latin neighbors. We expect that the projected recovery in U.S. manufacturing will provide stimulus to the Mexican economy and that we will see a moderately strong turnaround in that economy this year. We also expect positive growth to return to Brazil, but the risks there are greater and the ties to the U.S. economy are weaker. For Argentina, we have projected further sharp declines in output this quarter and for the subsequent

four quarters. But it is impossible for us to have any confidence in that outlook as Argentina's problems are as much political as economic, and the resolution of those problems is not yet in sight. Moreover, there are additional risks to political and economic stability in other South American countries, such as Venezuela and Colombia. The direct effects on the U.S. economy of developments in South America are not likely to be large, but a clear downside risk to our forecast is that these problems might result in greater turmoil on international financial markets than we now envisage. I should add, however, that developments in global oil markets could have substantial effects on the U.S. economy, and oil prices have moved up noticeably over the intermeeting period. Additional instability in Venezuela could add to the forces putting upward pressure on oil prices.

With the stronger outlook for the U.S. recovery operating as the driving force behind greater optimism about the global economy, it may seem surprising that in recent days the dollar has come off its highs of late February. In part the explanation is a stronger yen, which is due to some factors that are likely to prove transitory given the unresolved problems in that economy. Indeed, yesterday we saw some retracing by the yen. But in part the move down in the dollar may also reflect some further attention by market participants to the U.S. external deficits and the controversy over trade policy and the Administration's position with respect to the "strong dollar" policy. With the dollar at a very high level and an expansionary cycle set to begin, during which the United States is widely expected to grow more rapidly than our trading partners for some time, the outlook is for widening U.S. external deficits. At some point, the rising mountain of debt created by those deficits may lessen the appetite of global investors for dollar-denominated assets. The baseline combination of stronger U.S. growth and tightening by the FOMC suggests some upside risk to the dollar that is offset in our minds by the possible reaction of investors to the return to ever-widening U.S. trade deficits. It is this thought that has led us to incorporate in the forecast the projection of a stable exchange value for the dollar.

CHAIRMAN GREENSPAN. First, I was just curious, David, in your hypothesis that the sharp rise in productivity is a function of companies being blindsided to an unexpected rise in output or sales, have you taken a look at data for individual industries? I ask because this hypothesis is somewhat testable in the sense that one would expect the companies that experienced the sharpest increase in sales or output also to be in those industries where productivity suddenly accelerated. Has anyone looked at that? I realize it's very difficult to do with our industrial production data because that's begging the question; we are assuming output per hour. But do we have any collateral evidence?

MR. STOCKTON. We don't, Mr. Chairman. You're right that one natural place to look because we actually get timely information on industry data would be in industrial production. But since a significant chunk of that index takes labor input and makes an assumption about labor productivity, that wouldn't be a very fruitful way of going about answering your question. For the rest of the economy, we get annual information in the gross product originating data—which would allow us to look at that—only with a considerable lag. Now, one thing we have noticed over the last six months or so is that productivity in areas where we have physical product data has been a little better than we initially estimated based on assumed labor productivity. So there's a little evidence. We do not get those data with high frequency, and they don't explain the fourth and first quarters. But I think they perhaps suggest that something has been going on over the last year that has been better than we expected.

CHAIRMAN GREENSPAN. Does the fact that initial claims seem, at least temporarily, to have stagnated at a weekly level around 400,000 suggest that the type of rises in payroll employment and in hours that are required to bring the growth in output per hour down may not be happening?

MR. STOCKTON. I think it would be too early to say because so far the initial claims have been running more in the 385,000 area than the 400,000 area.

CHAIRMAN GREENSPAN. Well, I thought our data had them a little higher, but maybe you're right.

MR. STOCKTON. I think the mid to high 380s was where our seasonals were suggesting that claims were lined up reasonably well with the payroll employment growth. For our forecast of payroll employment, which shows a gradual acceleration to about 200,000 a

month by midyear, we have a decline in initial claims to around 350,000 within the next few months.

CHAIRMAN GREENSPAN. Incidentally, what is the staff's estimate of the March industrial production index?

MR. STOCKTON. We have a positive .3 for total IP. For manufacturing it's .1, and that is being held down by a falloff in assemblies.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Thank you. Karen, in Japan one hears a great deal about the amount and speed with which manufacturing is being moved to other parts of Asia where costs are significantly lower, particularly in the high-tech sector. Does that suggest that this outsourcing of manufacturing in Japan will lead to a different response on the part of Japan to growth in other parts of the world? Will Japan perhaps not experience quite as much strength as has been the case in the past when economic activity picked up throughout the world?

MS. JOHNSON. It's certainly true that outsourcing has become a much-discussed phenomenon in Japan. And many of the foreign direct investment flows into Asia arise in Japan because Japan is still running a sizable current account surplus. It has funds that need to be invested, and that goes hand-in-hand with Japan's strategy to do more of the manufacturing in lower-cost places. So in some sense I think the answer to your question is "yes." The Japanese economy for some time has not reacted to its export sector the way it did, say, back in the 1970s. Many people would still argue that, given the condition of the Japanese economy, a falling yen and a consequent easing of Japan's deflation pressures, on the one hand, and a boost to its export sector, on the other, constitute the only salvation that they can envision for the Japanese economy. So I think it's a question of degree. Yes, it is perhaps less than it was some time ago.

But it's still true that the export sector and investment in the export sector are what has to happen in Japan to get the rest of the economy going. Therefore, I think many people would anticipate that we will see strengthening abroad turn into the difference between further contraction versus very slow growth—not a boom by any means but at least a difference of that much—in the Japanese economy.

MR. PARRY. It may be that the currency would have to move more to accomplish the same amount of stimulus.

MS. JOHNSON. True. It's certainly possible. But for example, the components that we've written down behind the scene so to speak—which give us a forecast of very low growth in 2003 rather than the contraction that we've projected for 2002—have to do with a combination of inventories plus exports working in that direction to get the Japanese economy to stop contracting.

MR. PARRY. Thank you.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. I have a question for David on the longer-term outlook for inflation, beyond the actual forecast period. I'm looking at the baseline scenario and thinking about where the economy will be at the end of 2003. We will have had a year of 4 percent real GDP growth; the economy would be growing beyond potential. The output gap is eliminated at that point, and the unemployment rate is at 5.3 percent, which is your estimate of the NAIRU. And you mentioned that we probably would have to raise rates in 2004 to avoid overstimulation at that point. Do we currently have a forecast for inflation for 2004? I'm just wondering if by raising rates in 2004 we will be too late—later than the market expects—to avoid inflationary pressures at that point.

MR. STOCKTON. Actually, this is an issue that Vincent will be covering shortly in his remarks. But looking out beyond the Greenbook forecast interval—again, I caution you to take these figures with an enormous grain of salt and maybe an entire salt mine—we would expect close to another 100 basis points of tightening to be necessary in 2004. Combined with the tightening we're now assuming in 2003, that additional tightening in 2004 brings growth roughly in line with potential, stabilizes the unemployment rate at just a little above 5 percent, and holds the core PCE inflation rate at roughly 1½ percent. So the design of this forecast was that it was possible for you to achieve that particular equilibrium going out beyond the Greenbook forecast period with the amount of tightening we built in here. Obviously, there are associated strategic questions about tightening earlier versus later, and Vincent will be talking about some of those issues in his presentation.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. I had a question similar to Michael's, and maybe I should just wait for Vince to talk. Basically I want to ask you what you think the markets are telling us about inflation expectations, which we seem to think will continue to be low at the end of 2003. They fit my definition of low, let me put it that way. Any inflation rate that starts with a 1 strikes me as low, and inflation doesn't seem to be going anywhere. I recognize that 2004 is still up for grabs, but the fed funds market seems to be implying more tightening than we have in our forecast. Certainly we've seen a good deal of movement in the yield curve as incoming data have started to be more positive. It just strikes me that everybody either really believes that a higher rate of return is necessary because of higher rates of productivity or that there is some inflation risk that nobody is talking about or that we don't see in inflation expectations out there. So that was one question, and probably Vince is going to answer that.

My other question had to do with this mystery of consumption. Why does it stay so strong? Granted, the levels aren't strong compared with other recoveries, but given that there is reason to believe there is no pent-up demand, your forecast for consumption seems rather strong. When one looks at it relative to disposable income, it is pretty strong. Relative to wealth perhaps it isn't all that strong, so maybe there is some room. But you mentioned some considerations with regard to the risks in the outlook for consumption. So I thought I'd just ask you about that.

MR. STOCKTON. Well, so far—really up until the current quarter—our consumption functions that include both disposable income and wealth in them were tracking reasonably well. One of the points I was making in my remarks was that we actually have been assuming that there would be some shortfall in consumption behavior relative to those fundamentals, given the sharp rise in unemployment and the deterioration we saw at least for a time last fall in consumer sentiment. That had been a reasonably reliable feature of past business cycle downturns. Again, up through the fourth quarter of last year, it looked as if consumption was moving along reasonably close to what the fundamentals would suggest. It will be more difficult for us to tell that story if consumer spending continues to increase at the pace that is apparent thus far in the first quarter. It seems to be moving above what the fundamentals would suggest. Now, that could mean that we're wrong about the fundamentals. That's certainly a possibility. Either the productivity growth could be stronger, or the overall underlying aggregate demand in the economy could be stronger than we think. And that may be what that consumption behavior is reflecting. But it's also possible that we're going to get a bit of a payback for some of this current strength going forward. In essence, we've assumed that in this forecast. We think consumption is getting a little ahead of the fundamentals in the first quarter, and we expect a bit

of retrenchment, which allows some upward movement in the saving rate from its current level to about 2½ percent over the course of our projection.

Personally, I think the risks in our consumption forecast are now fairly evenly balanced. I could see how it could continue to come in stronger than we're forecasting, but I'm still a little nervous that some of the strength in consumption that we've seen has been temporary. It may reflect some relief that this recession isn't going to intensify and people are doing a little more spending. Or the substantial price discounting that we've seen may have encouraged spending that is not likely to persist. So I could see some downside risk as well.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. President Moskow asked my questions. Thank you.

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. I'd be interested in some comments about what is going on in the German and French economies at this point.

MS. JOHNSON. Germany is in the awkward position of being the weak link in the euro area, which certainly changes the nature of the debate within Europe from that prevailing in the final stages of the pre-EMU period. Both of those economies are in the throes of an election cycle, which is certainly complicating events this year. The Germans are in the midst of a wage round, which is getting a little ugly also, with threats of strikes and disagreements being made public and so forth. So on balance I still see the French economy as showing a bit more buoyancy and vigor than the German economy. That had tended to be the case in 1999-2000. Oddly, the French economy was looking better than the German economy and showing more flexibility, which is certainly something the French had not been viewed as possessing before. That's still on balance true.

We just had a summit on the part of the EU that had been billed as the one in which structural reform was supposed to be the key. The tone coming out at the end of that summit was a sense of disappointment. Part of the explanation of that was this election cycle. Schröder, at least based on views of colleagues that I see when I travel to Europe, is thought of as having failed. And the CDU is actually rising in the polls, which presents an interesting notion of what might happen next in Germany.

So on the whole, nothing terrible is happening in either country, but they're not succeeding in solving the problems they claim to recognize that they have. On balance, France probably is doing a little better than Germany in terms of the basic macroeconomic dimensions that we usually track.

CHAIRMAN GREENSPAN. Anybody else? If not, who would like to start the roundtable? President Jordan.

MR. JORDAN. Thank you, Mr. Chairman. On the region, first I must say that even our most reliably gloomy directors and other business contacts are finding it harder to sustain their pessimism, but they work at it. [Laughter] Broadly interpreted, even those who only grudgingly admit that the situation is not as bad now as it was a few months ago—or at least not as bad as they had feared—are very quick to add that business has a long way to go to get back to where it was, in their fond recollections, a couple of years ago. Even the technology sector seems to be showing some stirrings. The very fond memories that people talked about regarding how great things were just a couple of years ago reminded me of a bumper sticker I often saw when I traveled in Texas on business in the mid-1980s. It said, “Lord, permit me one more boom, and I promise this time not to piss it away.” [Laughter] I think that's a prayer that policymakers should not want to see granted.

Both residential construction and public-sector infrastructure construction are reported to be continuing at a solid pace. In fact, one company said that its backlog is now 20 percent above the level of a year ago. One very large construction company that operates not only nationally but even outside the United States reported that, as of the end of February, it had already booked 40 percent of the new business it was expecting to book this year.

LTV Steel has new owners, and they hope to resume operations in May. The combination of unloading retirees' pensions and health care costs onto taxpayers, along with substantial debt write-downs, renegotiated union contracts, plus the new tariffs on imported steel is said to be enough to ensure a good return on investment for the new owners. And it should enable them to take market share from otherwise still solvent and from already bankrupt companies as well. The moral of the episode for the industry may be that the first into bankruptcy wins!

Airlines that serve the region continue to report improving traffic, and they are adding flights, although operations are still well below year-ago levels. We checked with major appliance manufacturers that operate in the region, thinking their reports might tell us a little about what is going on in inventories for at least one industry. They said that production this quarter is going to be substantially above that in the first quarter a year ago—on the order of 20 percent in a couple of cases. But then they were quick to say, “But remember that the first quarter of last year was a time of sharp reductions in production because of concerns about rapidly rising inventories.” Now with inventories at more-acceptable levels and final sales having remained good, they are increasing production and expect to report very good earnings for the first quarter.

An increasingly cited concern among business leaders is the sharply higher cost of insurance. In fact, one director who sits on the board of directors of one of the nation's largest insurance companies—and this is an individual who spent his own career in manufacturing—said that he had never seen an industry with as much pricing power as the insurance industry enjoys today. He added that he believes accountants' fees also will rise sharply in the near future.

Turning to the national economy, if there ever was a time to practice pedal-to-the-metal monetary policy, it was last year, especially after the terrorist attacks. We were able not only to inject a massive amount of liquidity during the days following the attacks but to continue to do so for a couple of months until economic activity did appear to be stabilizing. Importantly, we were able to do so with our currency continuing firm in foreign exchange markets and the apparent inflation premium in bond yields remaining more or less steady. To me that is the best evidence we could hope for that the credibility of our commitment to maintaining the purchasing power of our currency is unaltered. It took a long time to build that credibility. And the favorable outcome of our policy actions last year may be due as much to the strength of our reputation as to our actual decisions.

By the end of the year, emerging information about the economy was such that reasonable people could differ about the desirability of more insurance against risks on the downside, and in fact, the Committee's decision in December was not unanimous. In the three months since our last policy move, developments in the real economy and in the financial markets—which I thought Dino laid out very well in his opening remarks this morning—have signaled that this economy is highly resilient and that the outlook for businesses and households has turned favorable. During this time, financial market commentary has been that monetary

policy has been unchanged. But the rebound in real activity and the upward movement in market-determined interest rates tell us that the natural rate of interest has been rising. In that context, an unchanged nominal overnight rate has become, de facto, more expansionary. If de jure easing in December was less than a sure thing, then further easing in the subsequent months, even if de facto, is less compelling. Certainly there is a potential for events that will lead to further downside impulses and will unmistakably be read as such by everyone. Barring such events, the odds favor the building of momentum, the time for raising the funds rate coming nearer, and the magnitude of the increase becoming larger in order to catch up with the already rising equilibrium rate.

If I were in charge of drafting the risk statement—and after I wrote this I realized that Don is not at any risk at all of losing his job—I would say, “Recent and prospective developments in the real economy and in financial markets have tilted the balance of risks toward the stance of policy becoming pro-cyclical on the upside, and we must remain vigilant of the need to ease off the monetary accelerator.” Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. I’m leaving space between you and Bill Poole! [Laughter]  
Go ahead, Bill.

MR. POOLE. I won’t get into that topic! The sense I have from our directors and also from some commercial real estate folks who recently attended a luncheon at the Bank is that they don’t see a strong surge in hand, but there is a tone of more optimism.

My Wal-Mart contact says that it’s a little hard for the company to figure out what is going on because they believe that they are taking market share, particularly with the K-Mart bankruptcy and store closings. Nevertheless, they are already in the process of revising up earnings expectations. In mid-February, just about a month ago, Wal-Mart announced to

analysts that it had a higher expectation for earnings, and they are already revising the estimate up from there. Inventories are in excellent shape. Higher consumption spending will lead to higher ordering; there is just no excess stock in the stores. Wal-Mart sees no important regional differences and is expecting sales growth this March over last March to be in the 9 to 11 percent range.

As for the transportation industry, my FedEx contact said that at this point vigorous growth in its domestic business did not seem likely, but he indicated that there was a noticeable surge in business from Asia in particular, including Japan. Currently Asian business is up 7 to 8 percent on a year-over-year basis, and he is anticipating a 9 to 10 percent increase for next quarter. Most customers of FedEx say that inventories are now too low to meet the demand that they see. While this is not true for those in the high-tech area, even there the message is, "Stand by, we may need more capacity for shipping goods." He noted especially that the investment incentives in the stimulus bill might have a large impact on the high-tech sector. My UPS contact said that their customers don't see an immediate surge; their expectations are that business will improve in the third quarter, but they don't see it happening quite yet. The UPS situation is complicated by the fact that its contract with the Teamsters is being negotiated and apparently the Teamsters and UPS at this point are rather far apart. So, that's a big problem for them. My Hunt Trucking Company contact also said that his firm does not see a big surge of business, but he noted that on occasion recently his firm has had to turn down customers because of the unavailability of trucks for shipping. There has been a major reduction in capacity because of all the bankruptcies in the trucking business, so occasionally—though not often—they have had to turn down business.

Overall, it's easy to make the case sector by sector that we can expect a moderate recovery. It's hard to see, for example, how housing can have a big surge. But from a macro perspective, it does appear to me that we have a massive amount of policy stimulus in place. Monetary policy has been very expansionary no matter how one measures it, and there are fiscal incentives as well. So, it may well be that we're going to be surprised modestly sector by sector and that it's all going to add up to a pretty good year.

I want to thank the staff for looking into the industrial production question. I think the staff memo on that was distributed to all Committee members. Let me just mention the bottom line on this. When growth is vigorous, we know that there's a somewhat pro-cyclical pattern to productivity. The initial estimates of industrial production are heavily based on input measures, so in a period of vigorous growth, the estimates of the industrial production index will tend to be underestimates. Let me cite the history of the initial reports of monthly changes in IP versus the revised numbers for the first twelve months after a recession trough. Beginning with March 1975, if you add up the first reported month-by-month changes over the next twelve months and average them, that gives you 6.83 percent growth in IP. Currently, the index as we look at it says that growth was 10.3 percent in that period. That gives you an idea of what happens as a consequence of the index revisions. In the first twelve months after July of 1980, the first reports showed 7.3 percent growth, and it's now reported at 10.52 percent. In the first twelve months after November 1982, the initial data had growth at 13.13 percent, and it was revised up to 15.27 percent. In the year after March 1991, growth was initially reported at 1.4 percent, and now it's shown as 1.8 percent. That was a slow first twelve months after a trough.

My main reason for being interested in this subject is that, given the prevailing view that we're going to have a modest recovery, we need to be very careful that we don't have our

preconceptions reinforced by the first reports on industrial production. We need to pay attention to the revisions in subsequent months as we get the actual production data. Thank you.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, our contacts indicate that economic conditions in the Twelfth District are improving, although areas of weakness remain that could restrain the pace of recovery. District contacts report a pickup in economic activity over the past several weeks, and job growth has turned positive in most states. The turnaround appears to be broad-based across sectors but is especially solid in those industries hit hardest by the aftermath of September 11. Recent job growth has helped keep the District's unemployment rate steady despite strong labor force growth. However, it remains a buyer's market, with numerous job applicants to choose from and little or no upward pressure on wage inflation.

Despite broad signs of recovery throughout the District, areas of weakness do exist. Commercial construction is a prime example. Dramatic declines in the demand for office space in 2001 left many commercial real estate markets in the District with excess supply. In some IT-sensitive areas, vacancies more than doubled, and lease rates dropped 40 percent. Although contacts report that conditions in commercial office markets have begun to stabilize, it's likely to be some time before we see any significant resumption of new commercial construction. Durable goods manufacturing is another area that may be slow to recover. The District's durable manufacturing sector depends heavily on exports, especially to Asia. The value of District exports has been falling consistently since the end of 2000, with especially large declines in exports to Japan. Given the ongoing strength of the dollar and our disproportionate exposure to some of the weakest global economies, a rapid turnaround in export demand for District manufactured goods does not appear imminent.

The strength of the District's recovery in coming months will depend heavily on the IT sector. Conditions in that sector have improved in recent months. For example, orders, sales, and output among IT firms in the District have risen, and the pace of job loss in the IT sector has eased. However, we might not see significant improvement in profits and payrolls for some time, and a lagging recovery in the IT sector could well slow the District's return to full strength.

Turning to the national picture, my interpretation of the economic news since we met in January is broadly consistent with the consensus. The data have been decidedly on the positive side, suggesting that the recession is over; the trough may well be dated at December or January. We've revised up noticeably our forecast of real GDP growth both for the current quarter and for all of 2002. This revision includes, I might add, a steady tightening of monetary policy beginning in the second half of this year until the funds rate in our forecast reaches 4 percent in the second half of 2003.

Our forecast looks a lot like the one in the Greenbook, with growth of real GDP of  $3\frac{1}{4}$  percent in the current quarter,  $3\frac{1}{2}$  percent in 2002, and  $4\frac{1}{4}$  percent next year. Faster growth this year and next is accounted for mainly by a swing in business investment, both for inventories and for equipment and software. Since we now expect current excess capacity in labor and product markets to evaporate faster than we did before, our revised inflation forecast for 2003 is up about  $\frac{1}{4}$  percentage point, with the core PCE price index rising by just under  $1\frac{1}{2}$  percent. That is about the same as we expect for this year.

I believe it's too soon to begin raising the funds rate at this meeting, but we'll probably need to start this process before long. How much and how quickly we tighten will depend importantly on where we want inflation to end up. Typically, inflation is lower in the year after a recession than in the year before, and that appears likely to happen this time around as well. At

issue is whether these declines in inflation will be permanent. The latest edition of the Blue Chip economic indicators shows a long-run ten-year consensus forecast for inflation of 2¼ percent for the GDP price index and 2¾ percent for the CPI. So it would seem that many business economists, at least, expect us to let inflation rise from recent levels. I'd like to see us hold the line at around 1½ percent for the core PCE price index. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. The reports that we're now receiving indicate that the Seventh District economy is most likely in the early stages of recovery. Manufacturing in the District is showing clear signs of a turnaround. Our Midwest manufacturing index was up in January, with gains in three of the four subsectors we measure. So the strength is not just in the automobile industry. In addition, for the first time in over a year all three of our regional purchasing managers' indexes—for Chicago, Detroit, and Milwaukee—indicate expansion in February, with strength coming from new orders and production.

Our directors and other contacts report that customers are ordering for inventory rebuilding, and there are even a few reports of increases in capital spending from some appliance makers and auto parts suppliers. Nonetheless, many contacts remain cautious. At this time most businesses are saying that there is significant excess capacity and they are not planning to increase spending on fixed capital as quickly as they had coming out of previous slowdowns. Our advisory councils that met earlier this month echoed those comments about capital spending.

With regard to the labor market, manufacturers still appear hesitant to hire permanent employees, but two major temporary help firms headquartered in our District are seeing modest increases nationally in demand from manufacturers. One of them even mentioned receiving emergency calls from clients who were ramping up production unexpectedly. January data for

our District reinforced the impression that labor markets are slightly firmer in our region than in the nation as a whole, and the pace of layoffs also has slowed. Nonetheless, consumer spending is not looking as bright as elsewhere in the nation. Reports from our contacts in the retail, travel, tourism, and entertainment industries were very uneven. Still, by and large, even those reporting weak sales were not saying that things were getting worse. Furthermore, housing markets remain strong, and if labor markets continue to improve, that should bolster household sector spending going forward. Automakers are more bullish; most have raised their 2002 sales forecast once again—this time by more than 500,000 vehicles compared with the estimates they had last time we met. However, they expressed concern about increases in steel prices resulting from the recently imposed tariffs even though their purchase prices are fixed by one- or two-year contracts.

Turning to the national outlook, at our January meeting I was expecting that real GDP would increase 3 percent this year. Since then the outlook has clearly improved. The household sector has continued to surprise us on the upside. The positive developments on productivity should bolster household incomes and business profits, and the economic stimulus package is a plus for investment. Still, there continue to be downside risks. Inventory rebuilding will boost production, but whether that increase is sustainable will depend on whether the economy generates more-fundamental increases in final demand. Even with the stimulus package, I see investment as a major risk. Our forecast builds in a weaker-than-average cyclical recovery in business fixed investment. However, I'm concerned that excess capacity may weigh on capital spending even more than we have assumed. And negative wealth effects could weigh on the household sector more than our current outlook projects. So in light of these considerations, while I believe a recovery is under way, I expect that growth in the first year will be slower than

in similar periods in past recoveries. Overall though, I see the risks as much more balanced today than when we met in January.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. While the news on the District economy is still somewhat mixed, I would have to say that in general it has been on the positive side, perhaps surprisingly positive. Hiring has resumed. Activity in the manufacturing sector has stabilized and begun to expand. Mining activity on the iron range in northern Minnesota and the Upper Peninsula of Michigan has started to pick up, and that was true even before the tariffs on imported steel were announced. And for the most part, the economies in the western part of the District are reported to be doing well. Residential construction is a particularly bright spot. Some builders have indicated that they are booked out into 2003, although cancellations are always possible. I'm hearing very little about inflationary pressures, though of course one can find particular items about which people have some price concerns. Business attitudes are the one thing that continues to concern me because I think business people are still uncertain and quite cautious about the economic environment. I suspect that is largely because of their concerns about profits going forward. And I suspect that some at least are still adjusting with some difficulty to an environment of price stability. Retailers have generally done well in the District and, as Bill Poole mentioned, inventories in the retail arena are low. So if positive sales surprises continue, that will lead to substantial ordering and presumably to increases in production.

On the national scene, I have few comments to make. For some time, there have been reasons to be optimistic, and now I don't think it's going out on a limb to say that the recovery is at hand. I'm impressed by the size of the upward revision to the Greenbook forecast. I, too, was

earlier thinking that growth would be in the neighborhood of 3 percent this year. I'm not inclined to change my view on that just yet, partially because there's noise in the data and partially because I think there may be some payback effect yet to come from the consumer side. But if we do get growth of something like 3 percent, which is below the Greenbook forecast, I would still consider that to be a very satisfactory, or maybe better than satisfactory, year.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Mr. Chairman, at the last meeting I reported on Texas billboards, and I wish Jerry Jordan had alerted me that he was going to raise the issue of Texas bumper stickers today. One of my favorites is good advice for the FOMC. It says: "Be alert. Texas needs more lerts." [Laughter]

SPEAKER(?). I like that.

VICE CHAIRMAN MCDONOUGH. Don't laugh. It just encourages him! [Laughter]

MR. MCTEER. We know that the future keeps changing, but so does the past. The BLS has lopped 215,000 jobs off the estimate for Texas for the end of December, and that revision converted what we thought was an employment gain of 1 percent into an employment reduction of 1 percent. If I'm not mistaken, it changed the Dallas area from being characterized as one of the strongest metropolitan areas in the country in terms of employment growth to one with an actual employment decline. We had thought that employment in Texas had turned down about six months later than in the nation, but now it seems to have turned down at about the same time, around April. So we are in close correlation to the national economy in that regard.

In the latest Beige Book, the report from the Dallas District was one of the most negative, if not the most negative, of the twelve Districts. I asked for a report at last Thursday's board meeting on whether our contacts had seen signs of a pickup in the few weeks since the Beige

Book reports were compiled. The reports were mixed: A few noted some signs of strength, but most commented that they were seeing a continuation of sluggish conditions. The report from the semiconductor industry was downbeat. The pickup in demand is not as robust as was thought a month ago. And there's an expectation that much of the new capacity in the 300 millimeter wafer fabs will go offshore to Taiwan.

It may be too soon to say that the Texas recession has ended, but the stronger-than-expected performance of the U.S. economy raises the prospect of a quick turnaround. After declining for most of 2001, on a re-benchmarked basis Texas employment surged in January. Our leading indicators have been climbing for the last few months, and I'm becoming increasingly confident that growth will begin this spring.

One reason for concern has to do with the potential downside risks for the Mexican economy. I'm hoping that the Greenbook analysis of the Mexican economy, which suggests that the worst is over, is correct. However, the strong peso is pricing the maquiladoras out of the market, transforming them from a source of strength to a source of weakness. Maquiladora employment fell an unprecedented 17 percent in 2001. And Mexico's goal of getting its inflation rate to converge with that of the United States will continue to support a strong peso, which may not bode well for a vigorous turnaround in Mexican manufacturing as the U.S. economy continues to rebound. Leading indicators for the Mexican economy do not point to an upturn any time soon, and most forecasters anticipate growth in 2002 that is too weak to generate growth in output per capita. If the maquiladoras continue to be priced out of the labor market, a U.S. recovery may not translate into job gains along the border or increases in Mexican imports from Texas, as we might otherwise expect.

I'd like to compliment Dave Stockton for his excellent presentation and Karen for her earlier discussion of Argentina, which I thought was very good. Turning to the national economy, is this a great country or what? [Laughter] I must say that I find the persistent strength in the economic data to be very encouraging, and like everybody else, I've been revising up my forecasts over the last few weeks. The growth in productivity increases my optimism that any increase in inflation pressures will be delayed and subdued and that growth beyond the recovery will be more vigorous than we might have expected before, looking perhaps more like the later '90s than the earlier '90s. While we now have greater fiscal policy stimulus in the pipeline than was the case at our January meeting, the bulk of that stimulus is not likely to be felt for some time. Given the consistently improved economic data, the risks to the forecast seem more evenly balanced than they have been in quite a while. The only thing that concerns me a bit is the upward creep in oil prices in recent weeks; that could become a wild card going forward.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. As I look over the incoming data on the New England economy and consider the views expressed at various meetings I've attended in the period since the FOMC last met—meetings of our various advisory councils, our board of directors, and a variety of community groups of which I'm a member—I'm struck by a couple of things. First, as compared with the situation at our last meeting, not a lot has changed. The current situation remains challenging, but the economy appears to have bottomed out in an increasing number of areas. And the six-month horizon appears if not bright then considerably better than the present. But second, as we look back over 2001, what has changed since our last meeting—along the lines of what Bob McTeer just said—is our appreciation of what went on

during the past year. It now appears that the region experienced a larger hit to growth than had been thought, and this is playing out in most states, particularly in Massachusetts, in the form of a fiscal crisis.

Employment rose in New England in January, and unemployment fell. And while the unemployment rate remains significantly below that of the nation, labor markets are said to be much easier, with temp firms especially commenting on the increased availability of supply. Business is still quite weak for the staffing firms; the fourth quarter was characterized as the worst ever by one contact. But signs of a pickup in 2002 are emerging. Software and IT firms said demand rose in recent weeks, as customers began to activate dormant investment plans. Discretionary IT spending continues to be on hold, but some software niches are growing, particularly in the areas of security, supply chain management, and bio informatics. Small businesses and manufacturers say they are investing in must-do projects, especially those that increase productivity. But in general they're trying to make do with existing technology. In some cases, and this was particularly interesting, officials of small firms that are part of our New England Advisory Council—more than a couple of them—reported that they actually were using new technology to bring manufacturing back to the United States from places like India. Apparently they've run into innovations that have enabled them to offset the higher local salary and benefit costs, particularly in New England, and to improve the profitability and quality of their products as well.

Real estate markets in the region seem to have survived the worst of the downturn, with increases in commercial vacancy rates flattening out and residential markets gaining a bit, though it should be noted that residential markets in the region never really softened all that much. Similarly, consumer and business confidence has continued to pick up, though most of the

increase is focused on future expectations rather than current conditions. Indeed, at the most recent meeting of our Bank's board of directors, I found the sentiment to be similar to what others have mentioned. Businesses and bankers represented on the board were singularly more cautious—more conservative, if you will—and more concerned about the current situation than the economic data might warrant, particularly the economic data at the national level.

Recent annual revisions to regional employment data help to answer a few questions about the nature of the region's downturn over the past year or so. Given the concentration within the region of high-tech manufacturing and software firms, one would have expected New England to have experienced the recession earlier, more like the West Coast, and to be hit harder than the rest of the country. Earlier data did not indicate steeper employment losses than in the nation as a whole, but benchmark revisions now suggest that this was in fact the case. Such losses seem to have been concentrated in Massachusetts and primarily in business services, particularly in the area of computer services. The fact that the new data draw a bit different picture than the old likely relates to the number of small high-tech businesses in the region and the difficulty of accurately capturing the data from such firms in the ongoing employment information.

The revised trajectory of employment also helps to explain the severity of the state fiscal crises in New England and especially in Massachusetts. Outsized state revenue increases in the late '90s, fueled largely by capital gains and taxes on realized stock options, had financed expanded Medicaid benefits and cuts in state income taxes. Stock market related revenues stopped growing in 2001. Indeed, in Massachusetts overall state revenue grew at a rate of 7 percent or so in fiscal 2001 and is actually contracting at a rate of 10 percent in fiscal 2002. Given the pace of Medicaid cost increases this year and the yet-to-be-implemented phases of

state income tax cuts, large gaps in state finances are expected to continue well beyond fiscal 2003, even assuming that a solid recovery in the region is in place. Given the size of state rainy day reserves, which grew substantially during the '90s, some amount of the gap can be filled. But filling the rest won't be easy and will likely involve sizable cuts in state spending and the collection of new revenues of one sort or another.

Turning to the national picture, nearly every data release since our last Federal Open Market Committee meeting has brought with it good news about the growing strength of the economy. From the upward revision to fourth-quarter GDP to the surprising growth in productivity, the beginnings of job growth in 2002, the flattening of inventory depletion, the continued willingness of consumers to buy autos and houses, and the glimmers of a reenergized manufacturing sector, the situation is better now than I certainly expected it would be when we met in January.

Looking forward, the shape of our forecast is not unlike that of the Greenbook's. Given the surprising strength of Q4 and now Q1, we see GDP growth moderating a bit for the rest of the year, with growth Q4 over Q4 at about our estimate of potential—3¼ percent or so—and then faster growth in 2003. Given the moderate pace of the economy's rebound, unemployment in our forecast trends down slowly and inflation stays about the same, no matter what measure we use. Obviously then, I don't see much to find fault with in the general parameters of the Greenbook forecast.

I would raise two questions about the outlook, however. The first involves the risks to the forecast. As I see it, the risks, along the lines of Dave Stockton's comments, are becoming much more balanced than they were. On the downside, I think the very heights of the equity markets and PE ratios suggest some level of fragility and risk in that area. There is also some

downside risk in consumer spending, particularly given the moderating personal income growth and high debt levels. There is certainly some uncertainty about business spending other than that related to inventory depletion given the high levels of excess capacity. Clearly the new depreciation allowances work only if businesses want and need new equipment. I don't think a 2 percent reduction in the cost of capital is enough to drive new spending on its own. Finally, I think there is some downside risk in the state and local sector; I don't think Massachusetts is alone in experiencing a fiscal crisis.

But unlike the situation at the last meeting, there are upside risks as well. Consumer spending could be more ebullient than the modest growth pattern in the forecast. Indeed, comparisons of spending to wealth relationships suggest the possibility of some upside risk in that regard. So, unlike Dave, in terms of the consumer I see risks on both the downside and the upside. Contacts at Thomson First Call have stopped their bearish comments and seem to feel that analysts' projections of profits, even in technology, are believable. Except for Japan, the rest of the world seems to be pulling out of the downturn, and the potential for pressure on oil and other commodity prices is there. So the bets are not all one way at last.

This leads me to the second question—and a lot of people have made reference to this—and it's a policy-related question. By any measure, the stance of policy right now is stimulative. Real interest rates are at or below zero. This is appropriate for an economy in a downturn with lots of downside risks. Such risks prevail, but the strength of incoming data and the existence of upside risks as well seem to me to argue for a measured return to a more neutral stance. That would require a move back to a nominal rate somewhere in the 4 percent area, at least on the basis of the Bluebook analysis of equilibrium real rates. The question is how fast that move should be. The Greenbook forecast and the markets as well assume that the move will begin

relatively soon and will extend over 2003. However, that happens against the background of only slowly falling unemployment and inflation that, if anything, eases.

Clearly, we need to be forward-looking in policy, and we need to be concerned about the potential for the economy to overshoot. But I think we also need to be asking ourselves basic questions about whether or not unemployment rates in the low 5s, with inflation somewhere in the 1s, is what we're aiming for. Is that really the target of policy? We need to be talking about those questions in a more explicit fashion as we move ahead. For right now, I think there's probably a little time yet to engage in conversation about our objectives.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. In looking at economic activity in the Tenth District, we have to separate out Colorado a bit from the rest of the region. Excluding Colorado, we are seeing fairly good signs of a turnaround. Layoff announcements have subsided, consumers continue to spend, and housing activity is solid. Moreover, business confidence appears to be inching back up in most of the District. Colorado continues to contract because of some real weakness in the telecom sector, which continues to be plagued by excess capacity and some rather tough price competition.

Let me talk a little about the manufacturing sector. It is improving and, based on our surveys, there are signs of greater optimism about the future. The Bank's latest manufacturing survey found that production and shipments strengthened a bit in February. In addition, optimism about future production and orders continued to build. For the first time in many months, firms in the manufacturing sector expect to be hiring workers in the near future rather than laying them off. For now, capital spending remains below year-ago levels, but I'm hearing a lot of conversations about how manufacturers are looking at taking advantage of the new tax

law. It is extremely interesting to them in terms of how they look at their capital investment plans and the timing of any future investment. So it is on their minds at this point.

Commercial real estate in the District remains weak. Vacancies are high in most of our markets, putting some downward pressure on rents. Denver is clearly the hardest hit, with realtors saying that there may be at least a two-year inventory in that city, so they are a bit pessimistic right now. Consumer spending and housing activity are generally solid in the region. Apart from a few high-end stores, retailers say their sales have been improving and are somewhat above year-ago levels. And home sales have also strengthened. Starter homes are doing very well, and even the high-end area is starting to see some activity. Energy activity has stabilized after declining through the second half of last year. The District's rig count is the lowest in two years, and coal prices have come down fairly sharply, making it hard even for low-cost producers in Wyoming to be making a profit right now. Labor markets are slack, although there are signs suggesting that employment is stabilizing. We continue to experience a shortage of nurses in our region and a limited availability of workers in a few skilled areas, but employers are still able to find help without very much difficulty. At our Oklahoma City board meeting, a director who has a nationwide temporary help agency said that activity at the firm had picked up significantly across the country. So there are some signs of a pickup in demand for temporary help. Price pressures without question remain low across the region. And the ag sector is waiting for the farm bill.

Let me turn to the national economic outlook. Our assessment is really quite similar to the Greenbook's, namely that growth should be above trend beginning this quarter and continue through next year. The economic factors generating this forecast are clear, and I'll only mention them. First, monetary policy is clearly stimulative, with the real fed funds rate in the

neighborhood of zero. Fiscal policy has been stimulative and has become even more so recently. Energy prices remain relatively low, although we are seeing some increases in that area. And the inventory adjustment is contributing to growth.

Having cited these facts, I have a couple of observations—or maybe I should call them concerns. First, I think the likelihood that the rate of output growth will be greater than trend this year is high and increasing; if I were to put a number on it, I'd say the probability is above 50 percent. While the output gap is positive, the probability that the gap will close sooner rather than later is increasing, not decreasing. My second point is that the current fed funds rate, as others have said, is clearly below equilibrium, and I would say perhaps significantly below equilibrium. At its current level, it is generating substantial amounts of liquidity and, therefore, setting up conditions that I think will give rise to future economic imbalances. Moreover, taking into account Dave's lesson number 4, it is creating conditions that could generate higher inflation, say, twelve to eighteen months from now, based on the length and variability in the lags. So, in my view these are some of the factors we should talk about in the policy round. I would offer one other thought: I think moving sooner, maybe even today, may mean that we will have to move less later. And I believe that would be very favorable in the long term for the U.S. economy. Thank you.

CHAIRMAN GREENSPAN. Coffee is available, and I think we can take a break. When we return we will resume with President Broaddus.

[Coffee break]

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Thank you, Mr. Chairman. Conditions have definitely improved in our District since the last meeting, as seems to be the case elsewhere around the country.

Business people in our region are more optimistic than they were, but I would say that at this point their optimism is still rather cautious, along the lines of the attitudes that Gary Stern and some others have described for their Districts.

Breaking it down a little, local areas in our District with a significant defense presence, such as the Washington, D.C., and the Norfolk, Virginia, areas, are recovering nicely. We are also beginning to see some improvement in the District's manufacturing base in the Carolinas. Furniture shipments and orders in particular have strengthened, presumably because of the continued strength in housing nationwide. There has also been a glimmer of improvement for the first time in a very long time in the textile industry. That probably is also related to housing activity, and it has been quite a while since I've been able to say anything positive about that industry. We also see improved conditions in some other industries represented in our region, notably plastics and chemicals. So there are certainly some signs that our region is participating in the apparent revival of the economy nationally.

Other indicators, though, suggest that while momentum is building, it is building at a fairly moderate pace in our area. For example, what I hear about consumer spending in the region is fairly positive, but I wouldn't call it spectacular by any means. A number of retailers tell us they still have to do a lot of discounting to move particular goods and services. Employment appears to have stopped declining in the region, but as far as I can tell it really hasn't turned up sharply yet. And we still hear a few announcements of layoffs from time to time, although not nearly as many as we did last fall.

The revised Greenbook projections, of course, indicate a more pronounced improvement in the national outlook than some of the anecdotal comments I just summarized for our region might suggest. But the projections are certainly plausible, given the strength of the latest data. It

may well be that the anecdotal information I'm hearing is a little behind the curve, given the rapidity of the evolution of conditions generally. I also, like Bob McTeer, thought Dave did a great job with his briefing, and I think the lessons were well stated and well taken. Still, the revisions from the last Greenbook to this one—and I've been looking at the Greenbooks for many years—are about as dramatic as any I can remember. The staff now expects real GDP to grow at a rate of 4 percent in the first half compared with 2 percent predicted only seven weeks ago. For me perhaps the most striking change is the 2 percentage point upward revision in the projection for real GDP growth in the first quarter despite a fairly significant downward revision in the contribution from a slower pace of inventory liquidation. Of course, the difference is a big change in the projection of private domestic final purchases, which are now expected to grow at a 2 percent rate in the quarter as compared with the earlier projection of a 2½ percent rate of decline in the January Greenbook. As a lot of people have said, this apparent dramatic strengthening of final demand obviously reduces the downside risks that many of us, myself included, were very worried about last fall.

Moreover, the net growth in jobs in February, even if some of it was due to favorable weather conditions, suggests to me that the labor market may be stabilizing. I think that's very important because, if that is the case, it would reduce job security as a concern among consumers. And continued solid growth in jobs and real wages is needed to support consumer growth at the 2 to 3 percent range projected in the Greenbook.

Finally, the improvement in the manufacturing and industrial sectors of the economy at the national level—in addition to the regional improvement that I mentioned earlier—also reduces the downside risks looking forward because the weakness had been concentrated in those sectors. It now appears that manufacturing output will rise in the first quarter for the first time

since the summer of 2000. The prospects for manufacturing activity will brighten further if the significant improvement in business spending for equipment projected in the Greenbook actually materializes.

Against this background, it seems clear that the key question regarding the near-term outlook for the economy from the perspective of policy—and others have alluded to this—is how strong the early stages of this recovery will be. I think the answer to that question is going to turn in large part on the timing and the profile of the swing from inventory liquidation to inventory accumulation that presumably the economy is now in the process of going through. The Greenbook expects continued inventory liquidation, albeit at a progressively slower rate, through the middle of the year with actual restocking only beginning thereafter. I think the turn actually could come sooner due to stronger expected sales growth. If it does, that could have a significant impact on the behavior of the economy in the months ahead, which has implications for our policy in the near term that we need to think about when we have our go-around on policy later. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Mr. Chairman, business conditions have also improved in the Sixth District since our last meeting. Indications are that the pace of economic activity is increasing despite the fact that conditions in some industries and some regions are still quite weak. The District's single-family housing market remains strong, fueled by low mortgage rates. However, the large, stale inventory of high-end homes has shown little sign of declining, and one builder is now referring to these as "yet-to-be-used" homes [laughter] because he says he cannot in good conscience continue to call them new after having been on the market for so long. A similar problem remains in our District's commercial real estate market. Vacancy rates are high, and

reports of rent concessions are prevalent. One large and very successful commercial architectural firm—in fact the one that did our building—initiated a first round of layoffs last month. And major commercial builders tell me that they routinely are seeing eight to ten bidders on jobs that used to draw only two or three.

Our tourism and hospitality sector continues a slow but steady recovery. Airport passenger traffic has improved every month since September. Delta tells us that their domestic traffic was down a little over 8 percent in February from the same period a year ago, with international traffic still down about 13 percent. Delta has not sat idly by, though. They have used this period of extraordinary stress to do some very aggressive cost cutting. By dropping and only slowly restoring a number of flights, the company has actually achieved higher load factors than it had pre-September. In addition to cutting food service, they have announced the discontinuation of payments to travel agents. And just last week they announced that there would be no wage increases for non-union, non-management workers in the year 2002.

Our manufacturing sector is still mixed but is beginning to show signs of returning to some stability. Planned production cuts in March at the Ford auto assembly plant in Atlanta were not executed because sales of the Taurus model that is being built there for the rental car industry had improved significantly. In contrast, the former Lucent fiber optics division will lay off 300 more workers because of continued weakness in the telecommunications industry. At Lockheed's Marietta plant this week 2,700 union machinists walked off the job in a dispute over job guarantees. Interestingly, the average age of the striking workers is 53, with twenty-one years of experience at the Lockheed plant.

Regional transportation businesses reported that rail and truckload volume improved for some commercial and industrial cargo but remained weak for coal, forest products, and paper.

The paper and pulp and textile-related sectors continue to struggle. The trade dispute over steel tariffs has come home to roost so to speak, as Russia banned American shipments of poultry products to their country. This development does not bode well for Southern poultry producers where exports from Georgia and Mississippi currently account for about 15 percent or more of the local poultry industry's revenue.

On the national front, the flow of more positive information that many of us noted in January has continued, enhancing the chances that the recession has bottomed out and that the economy is on a more upward trajectory. However, I'm not yet prepared to be quite as optimistic as either the Greenbook or our own Bank's VAR model forecast about the speed or the trajectory of the recovery. I continue to be somewhat cautious, thinking that, after the inventory rebound has materialized, growth in final demand may be more modest than some are anticipating, with less improvement in profits and investment spending. One of my directors last week quoted someone as suggesting that it's beginning to feel like a profitless prosperity. In addition to other fundamentals that would seem likely to temper the vigor of the recovery, the recent rise in oil prices, as others have mentioned, could have a damping effect on demand and serves as a reminder of the risks that once again may be facing us.

Balanced against these cautions I do recognize a number of factors that are consistent with the more positive outlook presented in the Greenbook. First, substantial stimulus remains in the pipeline. The money supply continues to grow at a very strong pace. Second, it's now clear that government deficit spending will likely expand, adding to aggregate demand. And the recently passed investment tax credit, as almost everyone has suggested, should further bolster demand for equipment and software, which already appears to be picking up. In that regard, I would mention a confirming anecdote from the chief financial officer of UPS. He noted that

semiconductor shipments from Asia were running about 8 percent higher in December on a year-over-year basis and that this trend had carried over into the first quarter of this year.

Additionally, while paring back their purchases of vehicles and airplanes, UPS told us that they are pushing ahead with their own computer and software investments. And our contact at Cingular Wireless, headquartered in Atlanta, indicated that they were pushing ahead with the roll-out of a new generation of wireless services on a pilot basis in California. Third, our recent contacts in the auto industry indicate that early March auto sales are continuing at a 16 million pace. Given that automakers show few signs of pulling back rebate and favorable financing programs, there may be little or no payback from last quarter's extraordinary sales. Fourth, the sustained rebound in productivity noted in the Greenbook may portend a more positive outlook for growth. That, coupled with the fact that many firms drastically cut their workforces, may present a more positive profit picture, especially if firms remain cautious about hiring.

Consistent with Tom Hoenig's comment just before the break, some of our directors suggest that this is the case in reporting that incremental additions to the workforces of many firms are occurring through the hiring of temporaries rather than full-time employees. Putting this all together leads me to the conclusion that the risks to the expansion have clearly become more balanced. Having said that, I would emphasize that I do not believe that the downside risks have gone away or gotten substantially smaller. And I think we have time to judge more carefully the momentum of the expansion before we start reversing the path of interest rates.

Now more than ever we need to think about the longer run, and I believe that the Greenbook simulations help us in that regard. Frankly, if offered the opportunity to lock in any one of the forecasts in the alternative simulations in the short run, I would take it in a minute. At this point, my own hunch is that the slower growth scenario may be among the most likely.

Looking forward, however, it's clear that rates currently are unsustainably low. They will soon need to begin to rise. Hence, I believe we must get in a position to make that happen. Suppose we ask ourselves, What should the nominal funds rate be with a real GDP forecast of 3 to 4 percent, as now reflected in the Greenbook, and PCE inflation between 1.4 and 1.6 percent? It seems clear that the answer would not be "near 1¾ percent" but something more like "4 to 4½ percent." This means that we have a lot of work to do. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. Thank you, Mr. Chairman. I reported at our last meeting at the end of January that the foundation for recovery was in place in the Third District. I now believe that such a recovery is under way. District economic conditions have improved over the past two months. The manufacturing and retail sectors have strengthened, and the outlook of business contacts in the region has turned considerably more positive. There are still pockets of weakness. For example, commercial vacancy rates have increased in the last few months. Nonetheless, forward-looking indicators suggest continued improvement ahead.

Our most recent data come from the Business Outlook Survey of area manufacturers. The March survey results will be released this Thursday. I reported last time that the index of general activity had turned positive in January for the first time in fourteen months. That increase was followed by another increase in February, and our March survey will show another positive reading at 11 percent. While that is marginally lower than February's 16 percent reading, I'm not too concerned about this decline for two reasons. First, the swing we saw in this index from negative to positive in January had been larger than the typical swing at the end of recessions. Second, though fewer firms reported an increase in activity in March, the number of firms reporting increases was more widely distributed across industries. The indexes on

shipments and new orders also remained positive in March, with about 7 percent more firms reporting increases than decreases. Last month the index of delivery times rose above zero for the first time in two years and it, too, remained positive this month. While firms continue to reduce inventories in March, the reductions are slowing; and for the first time during this downturn, firms are reporting that they expect to increase inventories in the next six months. Our survey also indicates that manufacturing firms continue to shed workers. They did so in March, and the workweek continued to shorten. However, consistent with the strengthening in activity, the employment outlook has also strengthened since January. Our March survey suggests that in general, manufacturers expect to increase payrolls over the next six months.

In a special question in this month's survey we asked the firms that expected to increase production how they expected to do it. Over 40 percent said that they planned to hire additional workers; about 30 percent planned to increase the work hours; and about 25 percent expected to increase production solely through increased productivity of current staff working at current hours. I find this last number particularly interesting. It underscores the fact that productivity gains have become a significant component of business strategy in our area. Productivity gains and weaker demands in earlier months have helped to contain price pressures in the District. In March, however, the current prices paid and received indexes in our Business Outlook Survey turned positive for the first time in eight months. Price expectations are positive and rising.

My view of the national economy has turned significantly more positive over the intermeeting period, as the data have been fairly consistently on the high side of expectations. I now believe the economy has turned. Notwithstanding the strong data, I continue to believe that this recovery will be weaker than most experienced in the postwar period. As we all know, however, weaker than usual doesn't mean weak in the absolute. In fact, the current range of

forecasts that have been made for the first quarter and for all of 2002 would support my characterization of a recovery that is weaker than the average postwar experience. This view partly reflects the strength of consumption spending throughout this economic downturn, which has been the primary factor in the mildness of this recession. In the early stages of a recovery, real PCE growth is typically quite strong, often above 5 percent, reflecting recovery in the consumption of durables more so than nondurables and services. But during this downturn, auto and home sales have remained strong. With less pent-up demand, consumption growth should remain moderate. I also believe that it will take time for business spending to reignite. On the other hand, the government budget continues to be more stimulative than anyone might have guessed only a year ago, and businesses have a habit of responding quickly to changes in market conditions. So we may yet be surprised on the upside.

In any case, given the revised, more positive outlook, I believe it's time to refocus our attention on the longer run. We now see that the recovery is in place. That's not to say it's a sure thing, but economic conditions have begun to improve across various sectors. Our expansionary monetary policy is having the desired effect. The Committee now needs to contemplate its strategy for moving the stance of monetary policy back toward neutrality. At this point, we don't need to decide where neutral is, but we need to take the necessary steps to allow us to raise rates in the not too distant future. This means preparing the public and the market for such a time. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. Governor Olson.

MR. OLSON. Let me add a couple of thoughts to what has been said thus far. We've talked a bit about the seeming disparity between the attitude of business leaders and the direction of the economy. I spent a good part of the '90s doing strategic planning and identifying

corporate goals, and one of the interesting changes that took place over that decade was a telescoping down of a multitude of corporate goals to a single one of shareholder value. I think the extent to which the business community will be happy with a recovery in the economy and the performance of their individual businesses will depend in part on whether or not they think the stock market is going to recognize it. So until that happens, I suspect that we will have a somewhat pessimistic or at least somewhat disappointed business community. Should they see the market start to perk up, I think we will see a difference in attitude.

I tried to identify some of the public policy issues that may affect the economy, and there are a few. One of them is the current absence at the moment of terrorist insurance. I think there will be a bill before this session of the Congress ends that will provide a backstop for that risk. We had some discussion earlier about the effect of the lack of terrorist insurance on the commercial mortgage-backed market. As the Greenbook points out, the market seems to have identified and isolated the areas of risk. So I think that the Greenbook well pretty captures that particular exposure. We've talked about the stimulus package. The Greenbook also deals with the potentially explosive Middle East situation. And the scenario in the alternative simulation that called for a \$10 per barrel increase in the price of oil, with only a modest downward pressure on the economy, seems to me to identify that risk exposure. A third one, the steel tariffs, we also talked about a bit. An important factor will be the manner in which the rest of the world views the imposition of those tariffs—a point that Karen discussed in an earlier meeting. It will be interesting to see whether the world sees that as a political event that is a single, isolated anomaly or if they see it as a drift toward protectionism. I think that will be determined in part on how the Bush Administration follows up that action and how it chooses to comment on it on an ongoing basis.

The one reservation I have about the Greenbook forecast relates to the federal government budget. The staff projects from 2002 to 2003 a 6 percent increase in federal receipts in spite of the tax increase and only a 4 percent increase in expenditures. That will take more discipline in an election year than we saw in the last election year cycle. So I think that's a potential downside risk. Having said that, I do not see any exposures that were not well captured in the Greenbook analysis and in the other material provided.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Thank you, Mr. Chairman. The Second District's economy has shown further signs of improvement in recent weeks. Retail sales were reported to be above plan in February, rebounding from a lull in January. Consumer confidence picked up noticeably in metropolitan New York City; there's a much better feel to the community. Labor markets are showing signs of bottoming out across most of the region, with modest job gains in both New York City and northern New Jersey in January. Residential markets for single-family homes as well as co-ops and condos have continued to gain momentum since my last report. In fact, the only weakness in the Manhattan market now is for rental office space and rental apartments. Bankers report some let-up in consumer loan demand. They are enforcing tighter credit standards on their commercial borrowers, and delinquency rates are holding about the same.

We agree essentially with the size and shape of the forecast in the Greenbook, and I must say that I, too, applaud today's staff presentation. Anything that combines humility, self-confidence, and humor is much to be applauded. We think that the risks in the outlook are in fact about balanced. Consumer confidence could be a little less than both our staff and the

Greenbook anticipate, and the international situation, which I think Karen captured very well, probably has more downside than upside risk to it.

In regard to the query about business fixed investment, I think you probably all heard of the business conference that was held in Boca Raton about three weeks ago. They should have been looking at the same data we are, and yet the vast consensus was that we were still in a recession and would not pull out of it until toward the end of the year. I think business people clearly are mesmerized by their own concerns about their profit pictures and probably are drawing too flat a trend line from their experience in the latter part of last year. One would have to think, if the business recovery is stronger than they expect, especially in light of labor productivity, that profits almost have to be stronger than they are anticipating or that at least a pleasant surprise in their profits could take place. And that could get business confidence turned up more than we are anticipating in our forecast.

Inventories are also an interesting situation because those of us who firmly believe that the inventories were being handled better because of information technology actually had a pretty good story going through the first three quarters of 2001. But in the last quarter the steep drop in inventories was just way off the scale. So I think one has to assume that a lot of the inventory liquidation was involuntary on the part of businesses and was a result of consumer spending coming back much stronger than they thought it would. Now the question is whether the secular downward trend in the inventory-sales ratio will continue—which I think is essentially what all of us are assuming in our forecasts—or whether the present inventory-sales ratio after that fourth-quarter drop is lower than businesses want it to be. If it's the latter, restocking could occur sooner and be more intense, which would be a very big positive kick and an upside risk to the forecast.

So in general, we think that intellectually the balance of risks is equal. I must say, though, that my gut is telling me that the upside potential is probably greater than we have in the forecast. So it seems to me that we're in a period of watchful waiting and that perhaps we should be particularly aware of the upside risk potential. Thank you.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. The phrase "March madness" normally refers to basketball but, as we can tell from the staff's introductory statements, March madness this year describes the frustration in the forecasting community as they deal with the changing incoming data. And I'm extremely sympathetic to that. I was one of those who saw mainly the downside risks at our last meeting, and I must say that this time it does appear that the risks are much more balanced.

First, on the upside, let me pick up where Bill McDonough just left off. I also looked at the inventory swing as possibly creating an upside risk. Clearly there are some signs that the massive inventory liquidation undertaken in the U.S. economy last year is over. The pace with which rebuilding occurs I suspect will be driven by a number of factors, but some may have to do with this sense of uncertainty due to terrorist attacks. That might lead businesses to want to hold more inventories than had previously been the case. And as Bill indicated, the inventory-sales ratios, instead of continuing to come down, may stabilize and indeed be a little higher than I think is implicit in the Greenbook.

The second area of upside risk has also been touched on, and that is this question of productivity. I, like others, am pleased that productivity seems to have held up quite well during this downturn. We saw just a few years ago that an economy that is enjoying a positive supply shock is not immune from upside risk or inflationary pressures. And it may well be that the

surprisingly good news with respect to productivity may lead to more-robust investment and consumption than perhaps is built into most people's forecasts.

The third area of upside risk is that the indicators certainly suggest that things are turning rather quickly. Let me just point out a couple of them. One is the ISM, formerly NAPM, indicator. Manufacturing activity rose in February to the highest level in a year. More importantly and interestingly, the new orders index from the ISM surged in February to its highest level since 1994, which I think is perhaps more positive news on the orders front than others may have picked up. Finally and most importantly on this sense of upside risks—and others have said this—both fiscal and monetary policy would have to be described as being stimulative for good reasons. But those forces that are built into the system may propel the economy over the next several quarters and lead to growth that is significantly above trend.

That said, there are still four things that I consider ongoing downside risks. One is that, while the growth rate is likely to pick up, the level of GDP will still leave an output gap for the forecast period. As a result of this output gap, the unemployment rate remains stubbornly high, hanging up above the staff's estimate of the short-term NAIRU for some quarters to come. That may weigh a bit on consumer behavior.

A second element of downside risk is that not only do we have slack in labor markets but significant slack in capacity utilization appears to exist as well. That may lead to a reduction in the incentives for businesses to expand capacity even as demand picks up. I would add to this the apparent pessimism of CEOs in our largest businesses, which I think creates a further risk for the investment picture. And unfortunately the CEOs of the larger firms are not the only ones with an uncertain outlook. The most recent NFIB survey results suggest that CEOs in smaller businesses also are quite cautious about investment, inventory, and hiring plans.

The third area of downside risk—and others have said this as well—is that the pessimism of CEOs seems to be driven by a strong sense of a weak profit outlook. One must wonder what the CEOs are picking up from their sales forces in particular that leads them to be much more pessimistic than the aggregate data might suggest. At some point, I think there has to be a recalibration or a reconnection between what the CEOs see and what the GDP numbers are reporting. And indeed, if the profit outlook of CEOs—built on their anecdotal data and their order books—turns out to be correct, then obviously that's a bit more of a downside risk.

Finally, many of the forces that have undergirded the economy during the last year, including decreasing mortgage rates, declining energy prices, and incentives to purchase automobiles, are unlikely to have a similarly stimulative effect going forward.

Putting all of this together, while sympathetic to the fact that we're facing a great deal of uncertainty, I would say that the risks at this stage—in terms of the issues that confront us—are relatively balanced and we should be in a position to respond appropriately to incoming data.

Thank you.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. There's a sense in which turning points present the biggest challenge to monetary policy. When economic activity was strong as in 1999 or weak as in 2001, the required direction of policy was clear. The balance of risks was clear, and market expectations were clear. When policy has to turn course as in late 2000 or now, things become much more delicate.

First, there can be little doubt anymore that we are at such a turning point. Throughout the past year the fundamental forecasting question was whether housing and consumption could hang in there until the inventory and capital overhangs got worked off. This was a question until

about two months ago. But at this point the string of positive data releases for both consumption and investment seems to have settled the matter rather decisively. On the consumption side, consumption itself has been stronger than forecast. The stock market is coming back. Tax cuts have helped. Layoffs were not as bad as feared. And now consumer expectations are beginning to rise. On the investment side, the inventory overhang seems to be working off very quickly, perhaps reflecting the warp-speed economy that a certain person here is always talking about. There could still be an overhang in communications equipment, but even new orders for that category are leveling. Orders and shipments for computers are rising again, as are other shipments. And now, like a fire truck arriving late at the scene after the fire is out and spraying water all over the place, the Congress has entered the fray with investment inducements, possibly magnifying the next boom. Reflecting all this, the Blue Chip forecasters are revising their projections upward in a pell-mell process—so much so that one wonders whether these forecasters are really forecasting or just looking out the window. [Laughter]

This all sets up a difficult issue for monetary policy. It has always been true that once we hit the end of an easing cycle we would have to tread delicately. We would not want to raise rates too quickly and risk snuffing out the turnaround, nor would we want to tarry too long with rates well below equilibrium and risk inflation down the road. That dilemma is still there. But with every day's news I find myself worrying less about the first side of the dilemma, premature rate rises, and more about the second, tarrying too long.

In late 2000 when we had the reverse of this dilemma we were able to turn policy around fairly quickly, going from a positive bias to an actual cut in rates in about six weeks. The time pressures on us may not be as great this time. We begin the process with high unemployment, low capacity utilization, and relatively quiescent inflationary pressures. But things have changed

quickly in the past two months, and they can change quickly in the next two months. For example, if investment suddenly came roaring back or if the productivity spurt raised profits and stock values, we would have to be ready to negotiate a turnaround and possibly a quick one.

Thank you.

CHAIRMAN GREENSPAN. Finally, Governor Bies.

MS. BIES. Thank you, Mr. Chairman. The information we've all seen since the last meeting indicates that the recovery is here. In fact, I question whether the word "recovery" is appropriate for the events we've been through and whether we really did have a recession. It clearly has been shallow and not a "V" or a "U." I think its shape has been a bit more like a saucer. I've been focusing on some of the manufacturing and trade inventory information, and I've been surprised at how fast inventory liquidation has occurred. Importantly, as a couple of people have already mentioned, the inventory-sales levels are back to where they were in the early months of 2000, which was the beginning of this slowdown. That would imply that business inventory positions are in good shape, and I think industrial production is already picking up in response to that.

In common with Governor Gramlich, the new fiscal stimulus package makes me wonder exactly what the target is. This recession was unique in that it was caused by excess business investment in selected areas. So to encourage more spending in the areas that already have excess investment seems to me a peculiar type of recovery medicine. Based on anecdotal reports from business people I've talked to as I've been traveling to some of your Banks and other meetings I've attended, I wonder if a lot of the excess capacity that appears to be out there is excess capacity that is permanently shut down and will never come back. If that's the case, it

will have implications also for investment going forward and—perhaps even more importantly—for productivity, since the idle capacity is likely to involve the least productive resources.

Consumer spending is continuing to grow, even adjusting for the unusual wave that was created between the fourth quarter and the first quarter due to automobile sales promotions. Consumer disposable income looks good. Income tax refunds are running way above where they were last year, reflecting I think both the tax cuts and over-withholding as consumers' incomes fell during 2001.

The productivity improvement in the fourth quarter in many ways shows that businesses were surprised by the level of final demand in that quarter. As we normally see during a recovery, productivity has increased. The pessimism about final demand that CEOs have shown throughout this period is one of the reasons that productivity has been so strong. CEOs believed that if they couldn't control the top line, then the only way to meet their profit goals was to deal with the expense line. In fact, the more policymakers use words like "recovery," the more I think that will tend to make CEOs and business people even more pessimistic, since obviously none of us around the table believes that the recovery from this period of slowdown will be anything like the recovery from a typical recession. So any CEO who is expecting a bounceback comparable to those experienced in past recessions is going to be sorely disappointed.

Finally, in terms of employment, if the unemployment peak is supposed to signal when we should start to change direction, then I would say that December was that peak. I find it interesting that we now have discussions of a high unemployment rate at 5½ percent and a long-term NAIRU at 5¼ percent. I would echo the comments of my esteemed colleague, the President of the Federal Reserve Bank of Boston, who suggested that in determining the

appropriate policy stance as we move forward we should look again at the NAIRU of 5¼ percent when our long-term inflation forecast is running well below 2 percent.

CHAIRMAN GREENSPAN. Thank you very much. Mr. Reinhart.

MR. REINHART.<sup>2</sup> Thank you, Mr. Chairman. I'll be referring to the materials that Carol Low distributed during the coffee break.

The resilience of household spending, the signs of stirring of investment, and the significant slowing of the inventory run-off that have become evident in the past seven weeks would seem to reinforce the judgment that the Committee's easing cycle has drawn to a close. The better news has cumulated to produce a 1 percentage point upward revision to the staff's forecast of real GDP growth this year and has been associated with sizable increases in market yields all along the maturity structure, presumably speaking to similar substantial changes in investor expectations. While there have been favorable developments of late, for real GDP growth to persist around or a bit above that of its potential will require household spending to continue to be well maintained—despite the saving rate being quite low—and investment to gather momentum, despite the fact that a recovery in profits has not yet been established. Market participants seem confident that policy will be entering a tightening phase, but no one expects the Committee to begin it today. That is probably because those analysts appreciate that even a quick snapback in spending will take some time to whittle away prevailing resource slack, and as a consequence, inflation should remain low for some time. This would give you the opportunity to await convincing evidence on the underlying support to the expansion of final demand before you need to act to preserve low inflation.

These considerations would seem to imply that the answer to the question, "When should the Committee begin removing the unusual degree of accommodation put in place last year?" is "Not today." Rather, the more pertinent question would seem to be how to assess the balance of risks if the funds rate were held at 1¾. On a surface reading of market prices, it might appear that the pronounced upward slope of federal funds futures rates implies that market participants assess the risks to be so tilted toward inflation that you will need to begin tightening very soon. I'll offer an alternative interpretation that suggests that the structure of market rates may not be inconsistent with holding the funds rate at its current level for a time. I will then use that framework to consider a key strategic issue you face that, in turn, bears importantly on today's policy choice.

The string of surprisingly strong data on spending and production released over the intermeeting period prompted the 10 to 55 basis point upward revision to market expectations of the federal funds rate shown in the upper left panel of your first exhibit. As a result and as plotted in the right panel, market prices now embed an

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

anticipation that the funds rate will rise to 5¼ percent in mid-2004. There are three notable features of this configuration of rates that I list in the middle left panel. First, federal funds futures rates move significantly above 1¾ percent in a couple of months, apparently signaling the belief that policy will begin tightening on the heels of the end of the easing episode. What is puzzling about this should be evident in the bottom panel, where I've split the path of the funds rate over the past two decades into the obvious easing and tightening episodes. As shown in the panel at the middle right, pauses since 1989 after a sequence of policy actions were lengthy. Second, money market futures rates climb almost continually over the next couple of years, implying that policy tightening will be extended. But as the middle right panel also shows, phases of policy tightening since 1989 have usually lasted under one year. And third, these expectations of imminent firming are difficult to square with the published forecasts of most market economists, who fail to foresee the sort of pressures on resources that would require action soon.

There is an alternative explanation that fits these observations on policy expectations quite well and that also may help to resolve these seeming anomalies. In a regime-switching model, we can view market participants as expecting the nominal funds rate to return to a more sustainable level rapidly once the tightening process starts but hedging their bets as to when that tightening will begin. The top panel of your next exhibit gives a formalization of this notion. In particular, I assume that market participants expect the Committee either to keep the funds rate at its current level or to begin tightening. Once a tightening phase is begun, everyone expects that the funds rate will be steadily, but fairly rapidly, moved up to some sustainable level with no reversals or pauses. Lastly, if the funds rate has continued to be held constant in any given month, market participants assign a constant probability of switching over to a tightening phase in the next month.

This model can be fit each day to the expected path of the funds rate derived from futures markets. The upper right panel shows the evolution of estimates from this model of the market's assessment of the probability that the Committee will begin to tighten next month. Although the current reading of an 11 percent chance of tightening beginning next month might seem small, these probabilities must be cumulated when making forecasts several months ahead. As plotted in the middle left panel, according to current market prices there is a one-in-two chance that the funds rate will be rising six months from now. The right panel suggests how aggressive that rise may be expected to be: Estimates derived from yesterday's closing futures rates suggest that market participants believe that once you begin to tighten, you will move the funds rate up about as fast as you moved it down—within one year—or about at the norm of the prior decade. However, presumably because inflation has fallen in the interim, you're viewed as likely to return the funds rate to a level of only 5¼ percent, lower than its level when easing started in January 2001.

To be sure, you are deciding on the appropriate stance of policy to adopt today, and what happens over time depends on developments that are inherently unpredictable, so you may view this interpretation as unlikely in practice.

Nonetheless, thinking in terms of the path of interest rates over the next several years highlights a key strategic question you face: What inflation rate would you prefer to prevail after interest rates and output have been realigned to more-sustainable levels? To get some sense of the possibilities, my colleagues in R&S who maintain the FRB/US model ran simulations, described in the bottom panel, that extend the forecast until 2007, preserving the key features of the Greenbook outlook. Here is our opportunity to dig deeply into the salt mines that Dave mentioned earlier. The simulations used the version of the model in which workers and investors form their expectations based on past observations of important macroeconomic variables. These scenarios envision the consequences of moving the real funds rate to its long-run equilibrium level of 3½ percent relatively smoothly in one year, along the lines of the regime-shifting model. The simulations differed according to when you are assumed to start tightening—next quarter, one year, or two years later. If deferring policy action for another year or more seems like a long time, I'd note that the cumulative probabilities derived from the regime-switching model imply the expectation of about a one-in-five chance that you will not have started tightening by the second quarter of 2003. That said, very little probability weight appears now placed in the markets on the possibility that you would hold the funds rate at 1¾ percent for more than two years.

These simulations, shown in your last exhibit, put numbers on the obvious: The longer the Committee waits to tighten, the more unemployment will be worked down at the expense of an ultimate step-up of inflation. What these simulations show is how sizable those differences can be. Were policy to begin moving the nominal funds rate up next quarter—shown by the black line in the upper left panel—the drifting higher of the unemployment rate to 6¼ percent by year-end 2003 in the middle panel would open enough slack to induce core PCE inflation (the bottom panel) to settle at around ¾ percent. Delaying that process by one year (the blue lines) or by two years (the red lines) would forestall that rise in unemployment at the cost of about 0.7 and 1.3 percentage points of higher inflation, respectively, down the road.

The ¾ percent rate of core PCE inflation achieved under the immediate tightening scenario would be as close to a working definition of price stability as the U.S. economy has achieved in five decades. If, despite the associated ¾ percentage point temporary rise in the unemployment rate, the Committee desired that outcome, it presumably would communicate to the public that its near-term assessment of risks was tilted toward inflation. After all, were your longer-run inflation goal to be ¾ percent, the prevailing inflation rate of 1½ percent would seem to pose a greater source of discomfort currently than the margin of unused resources. But you also might find some appeal in moving toward risks tilted toward inflation if you were worried that the economy could snap back more quickly than in these simulations, so that holding inflation around its current level, let alone reducing it, was in doubt before too long—that is, in the foreseeable future. The apparent turnaround in the prospects for investment, favorable news on productivity, and recently legislated business tax incentives represent a real shock that may warrant a real response in

short order. In that regard, I'd note that some estimates of the equilibrium real rate reported in the Bluebook rose as much as ½ percentage point over the intermeeting period.

It is also possible that the Committee might not see much benefit in defining price stability as the very low outcome for measured inflation in the immediate-tightening scenario. There were times late last year when the prospects for the economy were sufficiently gloomy that the zero bound to nominal interest rates loomed large. Keeping a bit of an inflation cushion might help to reduce those anxieties in the future in case aggregate demand weakened to the point where a negative real short-term interest rate was called for. If you're comfortable with the prevailing inflation rate and think the Greenbook assessment of the underlying forces shaping economic performance is about right, then either the staff projection or the scenario I dubbed "intermediate tightening" would offer an outlook in the near term with perhaps only small net deviations from your dual objectives of maximum sustainable growth and price stability. Moreover, the odds on additional adverse shocks, which darkened the outlook just a few months ago, might seem to be considerably reduced. If so, the risks might be seen as balanced. True, with the real funds rate close to zero, the Committee will ultimately have to tighten. But "ultimately" might be beyond the horizon at which you deem the foreseeable future to end.

The case for retaining the balance of risks toward economic weakness could possibly be made based on the delayed tightening scenario. Were your inflation goal really to be that much higher than recent readings, you'd presumably prefer to make some inroads into current resource slack and might see the possibility of additional easing as not too unlikely. But allowing that much slippage in underlying inflation seems too much at odds with what you have said and how you have acted in the past. Rather, retention of the tilt toward weakness would more appropriately be underpinned on some combination of two beliefs. First, these simulations, as well as the Greenbook forecast, might be viewed as being premised on too pessimistic a view of the economy's ability to use its resources without engendering inflation—a point Governor Bies and President Minehan have made. If that were the case, you could make those inroads into labor market slack seen in the delayed tightening scenario without the worrying drift-up of inflation—indeed, if you didn't, inflation might get uncomfortably low. Second, you might be concerned as to whether the expansion of final demand will be well maintained, especially if market participants get ahead of themselves in anticipating tightening if anything but the retention of risks unbalanced to weakness were announced. Essentially, you might have viewed the risks as balanced at the market prices that held in, say, late February, but the rise since then—and the potential rise were you to change the tilt—might seem to you as tipping the scales toward weakness.

CHAIRMAN GREENSPAN. Questions for Mr. Reinhart? President Parry.

MR. PARRY. Vince, this exercise is very interesting. If you were to show me the bottom two charts of exhibit 3, I think I would talk a long time about the attractiveness of the blue line, particularly relating it to some of the studies we've had in previous meetings about the zero bound. I'm troubled, though, that that outcome occurs by tightening policy a year from now. I'm troubled in the sense that it's hard for me to believe, and I don't know if I can articulate that concern well. Could you help me understand your analysis a bit? I ask because I see in the forecast what I view as rather strong economic activity and, given the long lags involved, to wait another year seems to me to be extremely dangerous, although I clearly see big advantages to that alternative outcome.

MR. REINHART. I think part of the answer, President Parry, is that it is beyond the ability of our model to differentiate between the FOMC's starting to tighten a quarter or a half year from now and four quarters from now. Given the artificiality of the exercise I've done, it may very well be the case that one would expect a much different configuration of market prices as each month went by and the Committee did not act. So that is clearly a risk here. I think the important point to get out of that true blue line is that it isn't obvious that policy action is imminent—that some element of delay is possible, and I've put it in these terms to help frame the balance of risk decision.

MR. PARRY. Very interesting. Thank you.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Yes, I have a similar comment and question. I'm typically a stay-ahead-of-the-curve guy, but I rather like the outcome depicted by the blue line. So you're shaking my preconceptions a bit. However, I think a strategy that a number of us might be comfortable with is to start tightening fairly soon but to go a little more gradually—not quite so

abruptly as you have in the black line in the upper right panel. Hopefully that might produce an end result somewhere between the black and the blue outcome shown below. [Laughter]

Actually, I think that would be my choice—the bruised choice.

MR. REINHART. I would point to the regime-switching model, which I think speaks to two things that you've said. First, it isn't necessarily the case that market participants have a sharply delineated expectation of when you will start tightening. So I think it isn't obvious—and I probably should have included this in my answer to President Parry—that failing to tighten after a meeting or two will necessarily prompt a backlash in the market. If the market has a 15 percent probability that you will act, then it has an 85 percent probability that you will not act.

The second part of the regime-switching model is the notion that the Committee can dip a toe in the water and the markets will view it as purely that. I think part of the attractiveness of a model like this can be seen in the experience of the tightening episode in 1994. The Chairman went up to the Congress and told the world that interest rates would be rising. Many Committee members shared that assessment of the economic outlook. Fed funds futures sloped sharply upward. But as soon as the Committee started tightening in 1994, those futures rates moved up. Essentially, the way I would view it is that the probabilities in the market that the Committee would act were relatively high but that the act itself sent them all to 1. The markets envisioned you embarking on a relatively rapid tightening phase and re-priced accordingly. So there is a risk associated with taking some action and thinking that the rest will be deferred. In my view the one opportunity in that regard, which some market commentators have noted, relates to the wide recognition that at least a portion of your easing actions involved in some sense taking out an insurance policy. Canceling that insurance policy isn't necessarily a commitment to completely realign rates.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. My first thought when I saw this chart was “be careful what you wish for” because I had indicated in my comments that we need to talk about these issues. I’m not sure I was prepared to talk about them at this meeting! In any event, I would totally want to avoid being associated with the red line because I do not believe that two years is the appropriate waiting period now. I believe that our policy stance is stimulative, and I think we have to raise rates. And I do take your point that once we start, the markets are going to assume that the trajectory will be fairly rapid.

Even looking at the blue line, the issue that I have is, Have we settled in on a number below 2 percent on the inflation side and an unemployment rate around 5 percent or so as being the ideal? Or are we willing—since events put us there in the late ’90s—to say that maybe some number in the 4s, the high 4s perhaps, is a better settling point for unemployment, given changes in productivity and given a whole range of things that are perhaps different within the economy? I don’t know the answer to that question. I just wonder about continually focusing on numbers for inflation that start with 1 and whether or not that brings into play the issue of measurement problems. The usual assessment of the extent of the measurement error is around 1 percentage point. So if we really have a number that begins with 1, there is very, very little inflation in the economy. Is that our goal? Again, I’m happy with the outcome in the blue line though I don’t think we should wait two years before we tighten. I don’t think we should wait even one year. I know we have to bring the funds rate up from the current 1.75 percent. The questions are when, how fast, and what our ultimate goals are.

MR. REINHART. I think a message in the alternative NAIRU simulation that Dave put in Part 1 of the Greenbook was that, if you believe the NAIRU is lower than the staff estimate,

you could associate yourself with the red line in the middle panel and get an outcome like the blue line in the lower panel or better. It's just a question of what your assessment of the NAIRU is.

MS. MINEHAN. Right.

MR. STOCKTON. May I make just one follow-up comment on that? It's important to remember, though, that you don't get to choose what the NAIRU is. [Laughter]

MS. MINEHAN. I know.

MR. STOCKTON. We don't know what it is, but we don't get to choose it either. However, by virtue of the fact that we have to write down a forecast, in some sense a NAIRU is embedded in there. But ultimately, as Vince's middle panel of exhibit 3 shows, to stabilize inflation you're going to be driven back to whatever is the equilibrium unemployment rate.

MS. MINEHAN. Yes, I know he had to make assumptions.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. I have a comment and then a question. The comment is that I think the difference between now and February 1994 is that we have been so much more transparent, beginning around that time, when we initiated the practice of announcing the decision taken at each meeting. So I think the likelihood of our surprising the market to the degree we did then is very, very low or certainly much lower than it was then.

Turning to the model, which you explained very well, Vince, am I right that the terms "right away," "in one year," or "in two years" as a policy model should really be viewed more broadly than that? Isn't it more along the lines of "right away," "wait a while but we're not quite sure how long," or "wait a little while longer though we're not quite sure how long that is either"? What I draw from this exercise is that essentially it's a very good guide on whether we

have to do something today and not a very good guide on whether the delay should be a year or less than a year. Is that right?

MR. REINHART. I would say that my confidence in the model is such that I contemplated not putting numbers along that axis but just sending the message that it was now, later, or even later.

VICE CHAIRMAN MCDONOUGH. Yes.

CHAIRMAN GREENSPAN. Small, large, and very large. [Laughter] Did you want to say something, Ned?

MR. GRAMLICH. I wanted to echo what Dave said. To reflect the properties in this model, the long-term unemployment rate has to be the NAIRU, which is 5.2 or 5.3 percent. And if we should be lucky enough that the NAIRU is below that, we could redo this exercise. We'd get the same basic pattern, but we wouldn't end up at the same precise rate of unemployment. However, we do have to end up at the NAIRU, even though there is statistical uncertainty about what that is.

CHAIRMAN GREENSPAN. Any further questions for Vince? If not, let me get started. This has been an unusually interesting meeting in the sense that we are integrating our policy discussion with the outlook for an economy that is undergoing significant structural change that will in turn determine where our policy should be in the future. Our problem is to figure out where that will be. In this regard, the extent to which the markets respond to what they think we think is a problem is in my view going to be an increasingly difficult issue for us to deal with as our presumed credibility continues to rise.

As a number of you have mentioned, we are at a turning point, however we wish to define it. A characteristic of turning points is that, as the economy goes from negative growth to

zero growth to positive growth, it is very difficult to estimate the slope of the upturn, and differing slopes imply huge differences in the performance of the economy. We are observing this interesting phenomenon where all the macro data that economists look at have turned decidedly positive. But people in the business community, as a number of you have pointed out, don't think in terms of the GDP data. They look at their profit figures. GDP is a very interesting construct. It is the market value of consolidated output, and consumer markets and final sales markets more generally dominate that aggregate. The average businessman is looking at his sales and his costs. Typically, labor costs do not constitute a very large part of those costs because most of them stem from purchased materials, which reflect somebody else's labor costs. So the consolidated system that we look at is not the model that the average businessperson looks at. As a result we have to reconcile, as some of you have pointed out, what is essentially a really quite negative outlook on the part of the business community and what we are seeing in the consolidated system.

I was at a Business Roundtable discussion not all that long ago and presented a GDP outlook that was not greatly different from what we've been discussing today. The numbers were smaller, but the upturn was there. My audience looked at me as though I were an alien from some peculiar planet. The difficulty obviously is that we're not going to get the economic performance that is implicit in our macro forecasts if indeed the view in the business community is that profits are not going to improve, that prospective rates of return on new facilities are not going to be adequate, and that pricing power is completely gone. The reason, as we're all acutely aware, is that consumer spending is going to be only modestly helpful at best, and the major impetus for sustaining the expansion after the inventory investment upswing peters out will have to come from business capital investment. So, translating all of this, the real danger

here is that we could end up with an inventory investment surge, and indeed that's pretty much what we may be getting at this stage, and find that the surge and the overall expansion have suddenly run out of steam.

We have seen this pattern before. I remember being both fascinated and disturbed in the early months of 1976 when the economy came out of the 1975 recession like a bull charging out of a stockade into the ring, and then all of a sudden the economy hit a wall. The swing had been very dramatic, but there was no impetus left, and the economy slowed down. Indeed, as you may recall, it slowed down enough that the Carter Administration came in postulating the persistence of a recession and proposed a fiscal stimulus package because that's what they had promised during the election campaign. But circumstances changed, and they got laughed out of the box, if I may put it that way. This is the type of situation that I think we are dealing with, and it's going to be very difficult to pinpoint what is actually going on.

In one sense we have seen a dramatic acceleration in the economic adjustment process as information technology has increasingly affected the performance of the economy. We ended up with a pattern of 50 basis point reductions in the federal funds rate when similar circumstances in the past would have called for 25 basis points. Something happened very quickly to which we responded very sensibly in my judgment. It's a fascinating issue as to whether the upside ahead of us will involve the same pattern. At the moment we don't see it, but I must say that we didn't see it on the downside either. The logic of a quick economic adjustment process on the downside presumably will apply to the upside. The argument against that is that, even though the economy has evidently gone through a period of marked increases in flexibility and resiliency, we may be facing an outlook for inflation that is much more difficult to assess. We currently are seeing price discounting, which is going to go away because it's essentially not cost

based. It is basically the consequence of downward pressure on profit margins and, given the outlook for underlying costs, that eventually is going to reverse, and we are going to get some price inflation largely because margins have to open up. And as they open up they will eventually run into the same problem they encountered previously, namely that labor costs will begin to rise. But the initial impact in an environment in which there is great flexibility and great resiliency is that we will not get very strong inflationary pressures.

As we went through the previous downside period involving a dramatic adjustment process occurring very quickly in the economy, we reacted very promptly. I don't think we were fully aware of the possibility that we could be looking at deflation in the eye. I think Bob Parry's immediate reaction to the blue lines in Vince's charts on alternative scenarios was a response to that risk. And when I looked at those charts I had the same reaction. Do I really want PCE inflation to go down to 0.7 percent or something like that? I would, of course, if I were sure that's as far down as inflation would go and that it would stay there. But with inflation at that level we would be exposed to a significant probability of deflation, and we would not have a sense that policy was in equilibrium. In other words, we are looking for price stability, and I think quite correctly. And having gone through this whole period, one could argue in retrospect that we may have moved too fast on the downside. But we were facing significant risks in that period, and I think our policy moves turned out just fine.

My impression at this point is that we are of necessity looking at something different. This is a different type of economy. This is a different type of business cycle. We now seem to be at a reasonably good point. We have come to that point in part by good policy judgment and in part by just plain luck, but I think it is one from which we can work. My impression without getting into much detail is that short-term rates in general clearly are lower than we may want

them to be. If the economy begins to rebound rather quickly, I think we're going to want or like to see long-term rates move up. Indeed if the mortgage rate goes up, we will get some restraining effects on personal consumption expenditures because a goodly part of PCE has been financed by equity extraction from the appreciation in housing values. Moreover, if the price of oil continues to rise, I think that is also going to constrain consumer spending to some extent.

So as far as I can see, the balance of risks is no longer tilted toward weakness; the risks clearly are about equal in both directions. And I do think we may have a short period when doing nothing is the best policy alternative. I would certainly suggest that we do nothing on the fed funds rate today. But I'm by no means certain about whether we will feel the need to move it up in May. Clearly one could argue that the pattern of adjustment in the economy has accelerated. In this regard, I think the risks of moving in 50 basis point steps are likely to be much too high. So we probably will have to move sooner and in smaller increments, given our incomplete knowledge about the changing overall structure of the economic system with which we are dealing.

My thought is that at least one way to get a leg up on the possibility that we may want to move in May, without moving the balance of risks to heightened inflationary pressures at this meeting, is to indicate in our press statement today that we view monetary policy as accommodative, without any further elaboration. That, I think, would enable us to move in May, if we choose, without generating any serious reactions in the markets. And if we decide not to move in May, that would be accepted as well. By the time of the May meeting, I think we will have learned a good deal about what is happening to inventory investment and its impact on the economy and, of course, about trends in profits and capital investment. I'm not saying that we'll know the final answers, but we'll surely know a lot more about the direction. So my judgment is

that the call is a relatively easy one for this meeting, at least as I see it at this stage. But I also believe that our decisions are going to become progressively more complex. The one thing we're certain about is that the world doesn't move as smoothly as Vince has portrayed in his charts and it's not going to look that way later. Perhaps he should have taken the numbers off these charts! Accordingly, I will put on the table the proposal that we keep the funds rate target unchanged at 1¾ percent and that we move the balance of risks statement to balance. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Thank you, Mr. Chairman. I concur with your recommendation. And I would point out that if the next move has to be up, which I think it will be, we can certainly move from a balanced balance of risks statement. There is no reason at all in my view to inhibit us from doing that.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you, Mr. Chairman. First, as for the 1994-95 episode, I really don't think that holds any lessons that would help us this time because what preceded our first action then was quite different from today. In that earlier period we had had, as I recall, some sixteen months of no change in the funds rate. And part of the lesson then was that any change at all was huge news. This time it has been very recently that we were taking overt actions. Also, the last actions after September 11 are very well understood in the market as actions taken that we probably wouldn't have taken in the absence of the events of that day. So to some extent we can distinguish between the reversal of the post-September 11 reductions in the funds rate and whatever tightening we might do after that. With proper statements from us to the public, I think that first part is easier to explain and to do. Beyond that, though, I think the pace at which we move rates up may be asymmetric from the pace on the downside. We cut rates rapidly because

the risk premium rose rapidly in terms of investment decisionmaking. And if the risk premium is only gradually revised downward as businesspeople gain confidence, it may be appropriate to be gradual in a tightening phase even after a very accelerated, aggressive easing phase. Having said all of that, if we hadn't been at all constrained at this meeting by the bias toward weakness in our statement at the January meeting, I probably would be more enthusiastic about an increase right now. But I do feel that constraint is real. So I think we have to have no action this time, but at least set the stage for possible actions in the future.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. I endorse both parts of your recommendation.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. I also endorse both parts of your recommendation. And I think that you've articulated well the kinds of challenges we're likely to face at the next meeting. Thank you.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Mr. Chairman, I support the recommendation. I had at the top of my page of notes that this is probably the easiest decision we're going to face for quite some time, which you pointed out as well. I also want to reflect just a bit on what we have ahead of us. The market is going to be asking the question—probably after this meeting in fact—how far and how fast rates will go up. We obviously don't know the answer to that. But in trying to produce a lasting recovery, it's going to be important not to have a “disconnect” between what the market comes to expect and what we think we are intending. I am attracted to the idea that Jerry Jordan mentioned about trying to condition the market to the concept that we have some undoing of the insurance policy that we took out after September 11—that that level of rates is sort of a baseline

to go back to. I do think that we run the risk of getting behind if we move only in 25 basis point steps. Just counting that out, it's clear that it could take quite a few meetings before we got back even to undoing the easing since September 11.

CHAIRMAN GREENSPAN. Oh, we could move intermeeting if necessary.

MR. POOLE. Well, we could. I'm not in favor of moving between meetings unless there is some significant reason in the incoming data to do that. At any rate, an intermeeting move would give us steps of 50 basis points, and whether they come individually in 25 basis point increments I think is much less important.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Mr. Chairman, I support your recommendation.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. I support your recommendation, Mr. Chairman.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Mr. Chairman, I support your recommendation. I'd like to make just a quick comment, following up on what Bill Poole said about how we would be looking at this process of tightening in the next few weeks and months. In my view it's important that our behavior as we move in this direction is symmetric with our behavior on the downside. We eased policy very aggressively last year. I supported that, and I believe it was appropriate. In fact, one can argue that those actions may have contained and restrained the recession. We were able to do that because we had credibility; our credibility was well established. I think we now need to move as aggressively on the upside as necessary to maintain that credibility so that we will be well positioned in the future.

Actually I think one could make a case for tightening policy today, but I agree with your recommendation. I would say that I like very much your suggestion that we use the term “accommodative” in our statement because I believe many in the market will see that as something very close to a switch in the tilt by two notches to a tilt toward tightness, which would position us if necessary to move the rate even before the May meeting. It’s a long intermeeting interval, and a lot could emerge in that period, and I think we ought to consider that possibility if we need to.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Mr. Chairman, I agree with both parts of your recommendation. I don’t think there’s any urgency to move today. I do think we can go from a balanced risk statement today to an increase in the funds rate in May without any problem at all. And I, too, like the idea of putting in the statement something about monetary policy being accommodative now.

CHAIRMAN GREENSPAN. Yes. Let me clarify a point with respect to what I said to Bill Poole. Bill, my view of 25 or 50 basis points is that I would think we’d start with moves of 25. We may have to pick up the pace. Indeed, that’s a judgment we can make. It’s just that I would not start with a 50 basis point increase. I think that would be disruptive.

MR. POOLE. I’m certainly inclined to go that way, too. But I can imagine data coming in that would suggest that things are moving a whole lot faster than we anticipated and that a move of 50 basis points would be appropriate.

CHAIRMAN GREENSPAN. The burden of proof would have to be on a very extraordinary change that we really didn’t anticipate. At least that’s the way I would look at it. President Stern.

MR. STERN. I, too, support your recommendation, Mr. Chairman. Let me just make one additional comment. We've been looking recently at what I suppose I would generously call some low inflation policy rules. While recognizing that beauty is frequently in the eyes of the beholder, the implication of these rules, at least at the moment, is that there is no need to move today.

CHAIRMAN GREENSPAN. Governor Bies.

MS. BIES. I support your recommendations, and I particularly like the comment about policy being accommodative.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, I certainly see a need to proceed as you've outlined today, and I would support that. I would add, though, that I think we could continue to see some fairly strong data and perhaps some data surprises on the upside, given what we've experienced recently. So I believe that having the accommodative language in the statement is very important. And in my view the possibility of an intermeeting move of 25 basis points should be a possibility that is out there. If the market understanding is that we're not planning to do 50 basis points but that we may be moving sooner than at the May meeting, I think that could be very healthy for us. I hope the press statement doesn't foreclose that possibility.

CHAIRMAN GREENSPAN. Yes. You know, we've been very fortunate. We have been able to move, with very few exceptions in the last couple of years, only at meetings. That is not our history. We have been required to move intermeeting many times. So it's only if policy is extraordinarily well constructed that we move only at these arbitrarily scheduled times. We hope that will continue to be the case, but we can't assume that, and I suspect you may well be right. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. I support your recommendation. I'm typically easily persuadable by simulations, but I think I like the scenario that you laid out—where we get started relatively early with smallish steps, feeling our way—better than the black and blue choice [laughter] that Vincent gave us. The latter might be black and blue in some different ways. I would recall a point that Jerry Jordan made earlier, and that is that if we raise nominal rates slowly, if the real rate is rising, we're still being pretty accommodative. So that might be another argument for getting started on a rate increase relatively soon. But the one point I would note about the simulations is that they lowered the cost of delay below what I would have thought, coming into the meeting. And that's an interesting point. I'm not sure I'm ready to believe it, but it's worth thinking about.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. In view of the clock, I will agree with your recommendation without further editorial comments.

CHAIRMAN GREENSPAN. Governor Olson.

MR. OLSON. I support both parts of the recommendation.

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. I support your recommendations, Mr. Chairman.

VICE CHAIRMAN MCDONOUGH. That's it.

CHAIRMAN GREENSPAN. I think that does it. Would you, Mr. Secretary, read an appropriate directive?

MR. BERNARD. The Bluebook page I'll be reading from doesn't have a number, but if it did, it would be page 13. [Laughter] "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.” And for the press statement: “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 are balanced with respect to prospects for both goals in the foreseeable future.”

CHAIRMAN GREENSPAN. Would you call the roll?

MR. BERNARD.

Chairman Greenspan	Yes
Vice Chairman McDonough	Yes
Governor Bies	Yes
Governor Ferguson	Yes
Governor Gramlich	Yes
President Jordan	Yes
President McTeer	Yes
Governor Olson	Yes
President Santomero	Yes
President Stern	Yes

CHAIRMAN GREENSPAN. Let’s distribute copies of the press release draft. Does anybody have any comments or questions?

SPEAKER(?). Excellent!

VICE CHAIRMAN MCDONOUGH. It deserves a standing ovation. Brilliant!

CHAIRMAN GREENSPAN. If there are no comments, I’d like to turn the floor over to Governor Ferguson who will continue our discussion on disclosure policy.

MR. FERGUSON. Thank you very much. At our last meeting we had a brief and not fully conclusive discussion on the question of disclosing dissents. The issue on the table was not only a transparency issue, but perhaps more importantly it involved legal considerations. From the standpoint of legal advice it appeared that it might be appropriate to disclose dissents earlier

than we have historically. Since we discussed this last time we've gotten further advice in a memo from Kieran Fallon and Virgil Mattingly, which was sent to you. Also you received another memo from me regarding a discussion among a small number of us on how to respond to both the legal issues and the philosophical issues about transparency. Since I've sent you a memo about that, I'll try to be brief.

The group of us who looked at this, which included Michael Moskow, Bob Parry, Bill Poole, Ned Gramlich, and myself, reached a couple of conclusions. First, we propose that the Committee make one set of changes in its disclosure policy. Second, we suggest that a number of other elements of our strategy with respect to communications remain unchanged.

The change that we propose is the one that is listed as item 2.A in the memo that I sent to you. That is to release the tally of the vote, the identity of the voters, and the preferences of the dissenters and to release all of that information as part of the press statement. Let me note the logic for that argument. To be clear, we believe that adopting any of these options has some risks and some benefits. So there is no option that is without concern. We thought that the option of putting into the press statement the tally of the vote, including the names and the preferences of any dissenters, would get us into a position where we are no longer tolerating the element of legal risk that we face currently. That risk is that we're waiting for someone to ask a question, in which case we would have to disclose the vote and perhaps be embarrassed that we hadn't disclosed it earlier. At the same time, we viewed this as a moderate or middle step as opposed to some of the other things we might have done, such as trying to create mini-minutes or to release the full minutes at a point that, while not contemporaneous, would be closer to the meeting. We are, if you will, feeling our way here, since we have no easy option of returning to

our previous practices once we take a decision. So I think our little group thought that the so-called 2.A option that I just outlined would be the best, recognizing that there are some risks to it.

Now, we also felt that a number of things should not change. We thought that we should not change the concept of a blackout period both before the meeting, which was not on the table, but also after the meeting. We favored maintaining the blackout for the rest of the week after the FOMC meeting, which is through Friday. We thought it was also important that during the intermeeting period we not disclose the contents of the meetings—as we currently do not disclose them—and wait for the minutes to come out. The third element of no change is that we would hold the release of the minutes until after the subsequent meeting. That recommendation was driven by a number of concerns, some having to do with the mechanics of trying to get the minutes done. Others related to concerns about the fact that there is a great variety of information in the minutes, some of which may continue to be relevant and some of which may not be relevant. Another factor, obviously, was the sense that once we've made a decision to go ahead with something, we can't go back.

There is one other thing that would not be changed. Obviously during the course of each intermeeting interval, after the blackout period and before the subsequent blackout period there's a time when we all give speeches and have discussions, etcetera. We would at that point be free to discuss the economy or to discuss an outlook but we would still be expected to try to avoid going over the line of disclosing any actual content of or conversation that occurred at one of these meetings.

So that's where this group came out, and I hope all of you have had a chance to read the memo. At this stage I'd like to open the discussion up for any comments, first from the other members of the group—Presidents Parry, Poole, and Moskow, and Governor Gramlich—to

make sure I have summarized our agreement. Then I would turn to others on the Committee who may have questions or may just want to state a point of view or preference. Shall we start with Governor Gramlich?

MR. GRAMLICH. Well, I would make just one point. The group was in agreement and Roger summarized the issues well. But there was a question of whether the dissents would actually be put in the press release or would merely be available to those in the press who happened to ask our Public Affairs staff for that information. I think our committee felt it was fairer to everybody, and particularly to those who do not inquire, just to put everything right in the announcement and also to modify the way we announce the discount rate votes as well.

MR. PARRY. I think we came out at the right place in terms of the announcement and how it would be done. The only issue that I thought might at some point be worth more discussion is when the blackout should end. There's a certain logic to having it end at the close of the day on Thursday. Having it terminate at the end of Friday means in effect that it really ends Monday morning. It's no big deal. Sometimes it's great to have an excuse not to accept a speech assignment. But I think there is a logic to having it end on Thursday after the release of the minutes.

MR. FERGUSON. President Moskow.

MR. MOSKOW. Roger's summary was excellent. I would just add that we had a very thorough discussion of all of the options, and I think it was a consensus that this was the best route to go.

MR. FERGUSON. I think that's true. President Poole.

MR. POOLE. Yes, I think we were all in agreement that if we could sustain the current procedure indefinitely, that would be great. It works fine. But it's not up to us to make that

decision. We are faced with a legal opinion here. And our small group was in agreement that it would be very unfortunate if this issue were forced upon us by someone else putting a FOIA request to us. So to us, announcing the vote tally is almost a “no brainer.” We need to get out in front and do this in the most satisfactory way. Staying with the current practice is just not an option.

MR. FERGUSON. Okay, let’s open the discussion now. I have Jerry Jordan next on my list.

MR. JORDAN. I would have preferred 2.B as my first option because it involves the least change and brings the least attention to the fact of a dissent. But I can live with 2.A, and maybe the reality is that that would be forced on us eventually. However, I’m not really concerned about the people who are not in the press room at the time we release our statement.

MR. FERGUSON. Cathy Minehan is next on my list.

MS. MINEHAN. Well, I’m going to tilt at windmills here. I recognize that it’s tilting at windmills, but I do want to be on the record with my concerns about this.

I have been in a lot of discussions about FOIA items. This is an unusual one. Usually the question is about whether or not information must be released or should be released. This is a debate about information we already release on a routine basis. So the debate is really around concepts of reasonable and prompt when applied to the timing of the information released. I think Virgil and his colleague have done a nice job of explaining to us how in the context of FOIA law “reasonable and prompt” can only be defined as relatively short periods of time. I also see the relevance of existing procedures with regard to the discount rate and other non-exempt matters. But he also noted that some delay in releasing the information might be allowed if an

earlier release were shown to have adverse effects on the accomplishment of the Committee's objectives. And here's where I have questions and concerns.

Clearly, we cannot, should not, and do not refuse to disclose the vote. We already make it available. But we, like all other central banks that vote and disclose the vote, make that information available after the passage of some time. Why? Well, to borrow Tom Melzer's words when this was discussed in early 1994, it was perhaps so as not to focus attention on the minority view rather than the consensus view of the Committee. We're a consensual Committee, to use Alan Blinder's terms. We release a vote that reflects the best sense of the Committee as a unit at the time. That is our objective at least in part. To encourage the media and markets to spend time on the dissenters is to take away from that objective, at least in my view.

Virgil's note argues that not disclosing the vote may serve to deprive markets of information that is useful about future policy. I think the reality is that that's not always the case. The policy decisions at the next Open Market Committee meeting are not directed by the dissents at the previous meeting. Events occur. Things change—sometimes relatively fast. And people's perspectives change as well. In fact, I think there's at least a chance that releasing the vote will serve to harden people's opinions in ways that frustrate the operations of the Committee.

If we make this change, several things could happen. Members could become increasingly unwilling to dissent, dreading the media onslaught. And in that regard, I question whether it is feasible to constrain members from speaking about dissents, even for as short a period of time as about a week. The second thing that could happen, on the opposite side, is that members could find the spotlight and this extra bit of attention to their liking. They might welcome the focus on the minority, which could create real schisms in the Committee. Of course, I'm not talking about present members! [Laughter]

In sum, if we believe that our current disclosure policies serve to meet the objectives of this Committee and if we make information available in a time frame that again meets our objectives—as do other central banks that disclose as much as we do—I don't see why we shouldn't be willing to stand up for those policies. If we get a FOIA request and are required to defend our current practices, I think we should do so. In fact, I don't see how we get out of this bind when the next step in this process is legislation, as has been proposed in the past, on the desirability of televising our procedures. I don't know how we get off this slippery slope if we go down it this far. How do we justify not bringing the television cameras in here? I don't see what it is that we're going to be talking about, with the possible exception of a limited amount of confidential material, that would be so highly confidential. I'm not sure that anybody reading the transcripts of our meetings five years after the fact would be convinced that what we talk about at the meetings here is all that confidential. How far are we down the slippery slope to the television cameras? That's my tilting at windmills.

MR. FERGUSON. President Hoenig.

MR. HOENIG. I see where this proposal comes from, and I understand it. I have a bit of sympathy for what Cathy was saying in the sense that releasing the minutes earlier and delaying the disclosure of the vote until those minutes are released made a lot of sense to me. That's because I still believe that putting the dissents in context helps. I know your committee discussed that option; I read the memo. I don't know how the lawyers would interpret it if we got into an argument, but I think a case can be made for delaying the release of the vote until the minutes are available. And the delay we've talked about is only two weeks, which is not an unreasonable period. But having said that, I think we are in a bind as far as releasing the vote at

some point. So if we don't want to release the minutes sooner, I don't think we have any choice but to release the vote after the meeting.

MR. FERGUSON. President Broaddus.

MR. BROADDUS. Well, I think both Cathy and Tom have made good points. These disclosure issues are always difficult, but it's generally helpful for me to try to get back to basics and fundamentals when I think about these issues. The way I see our actions affecting the economy, both short run and long run, is basically through the combined effects of what we do on the funds rate, what we say in the statement, the tilt, and all the other information we release as it relates to expectations and the yield curve. Against that background, I think greater transparency is better than less transparency. And that includes earlier release of information in most cases. So I'm very much in favor of where you came out. I recognize Cathy's point about the slippery slope. I see that that has merit. But I think there is some point where the slope is going to flatten out before we get to the TV cameras stage in our room here. Maybe I'm too optimistic, but that's the way I feel about it.

Even if we go with the recommendation you've made with respect to an immediate announcement of the vote, I still think it would be a good idea—in fact this probably gives us more reason—to bring the release of the minutes forward, as soon as possible. It might involve some additional expense. But in the context of all the other funds we spend on monetary policy and the private sector spends trying to figure out what we're trying to do, it's probably rather minor. So I would hope that we would think about moving in that direction.

MR. FERGUSON. Okay. President Guynn.

MR. GUYNN. I'm comfortable with where you came out. With time to think about it, it doesn't seem terribly threatening to have the vote released. It's far better than any of the

alternatives, which all seem to create another policy event of some kind. In my view, the last thing we need is another interim statement or announcement regarding our policy decision. I share President Broaddus's thoughts that if we could release the minutes earlier, even if it's a week earlier, that might be desirable. So that's something that I think we still ought to consider and get back to. But I'm comfortable with where you came out.

MR. FERGUSON. Okay, thanks. Governor Bies.

MS. BIES. I support the recommendation, including the fact that I think the vote should be in the announcement as opposed to just available separately. We get electronic information nowadays, and it's easier for everybody to see it at the same time and in the same document.

MR. FERGUSON. Okay. I have nobody else who has asked to speak. I assume that means that everyone else is—I'm sorry, President Stern.

MR. STERN. Well, I can be very brief. I agree with the comments that Al and Jack made. And as far as the TV camera is concerned, I suspect the ratings would be disappointing, to say the least! [Laughter]

MR. FERGUSON. Oh, I don't know, it depends on our star performer here. Are there any other comments? No one else came to my attention.

MR. MCTEER. I agree with your recommendation.

MR. FERGUSON. Okay, thank you. I think what this means is that while there are still some concerns—and no one will soft-pedal them or ignore them—we feel almost obliged to go down this path. The second question on the table is that we have the opportunity to implement this plan today. Today may actually be a perfect time because there were no dissents and, as someone said, it was probably one of our easiest decisions. So we actually have prepared the

same kind of press statement we had but with the added information about the tally of the vote, thinking that perhaps this would be the way to go.

VICE CHAIRMAN MCDONOUGH. Oh, Mayor Daley would have loved you! Guided democracy.

MR. FERGUSON. I would call your attention to the last paragraph.

MS. MINEHAN. Is that the way it will be done for the discount rate, Roger?

MR. FERGUSON. Yes, we're going to change that, as Ned mentioned. We will conform the discount rate approach to this one. Currently the way the press announcement of a discount rate change works is that a well-informed member of the press will ask the question about the vote and the Public Affairs staff will give the answer. So we think we really should conform the Board's practice on discount rate votes to this approach for reasons that Governor Bies and others have noted.

MR. MCTEER. What if there's a dissent in this vote? [Laughter]

MR. FERGUSON. As Cathy has already indicated, we're a mature Committee, and we will not let these decisions influence our vote on policy. Besides, the vote on the policy decision has already been taken. Are there any questions or comments? Hearing no objections, we will proceed down this path. Obviously, for this meeting after "voting for" the names of all of the members will be listed; and after "voting against" this time will be the word "none."

CHAIRMAN GREENSPAN. Let's just say unanimous.

MR. FERGUSON. All right. We'll say unanimous. That's what we're going to do. Okay? Thank you very much. And thanks for your efforts on this one.

CHAIRMAN GREENSPAN. Officially we have to confirm the date of the next meeting, which is Tuesday, May 7. Let's proceed to luncheon or supper or whatever you want to call it.

MR. KOHN. Mr. Chairman, I've asked people to submit suggestions for discussion topics at the June meeting. I've gotten returns from about half the Reserve Bank presidents and Board members. I'll take any suggestions through the end of this week if the rest of you want to submit something or if any of you want to amend your previous submission.

END OF MEETING