Meeting of the Federal Open Market Committee

February 2-3, 1999

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, February 2, 1999, at 2:30 p.m. and continued on Wednesday, February 3, 1999, at 9:00 a.m.

PRESENT: Mr. Greenspan, Chairman
Mr. McDonough, Vice Chairman
Mr. Boehne
Mr. Ferguson
Mr. Gramlich
Mr. Kelley
Mr. McTeer
Mr. Meyer
Mr. Moskow
Ms. Rivlin
Mr. Stern

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

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

Mr. Kohn, Secretary and Economist
Mr. Bernard, Deputy Secretary
Ms. Fox, Assistant Secretary
Mr. Gillum, Assistant Secretary
Mr. Mattingly, General Counsel
Mr. Baxter, Deputy General Counsel
Mr. Prell, Economist

Messrs. Alexander, Cecchetti, Hooper, Hunter, Lang, Lindsey, Rolnick, Rosenblum, Slifman, and Stockton, Associate Economists

Mr. Fisher, Manager, System Open Market Account

Mr. Ettin, Deputy Director, Division of Research and Statistics, Board of Governors

Mr. Winn, 1/ Assistant to the Board, Office of Board Members, Board of Governors

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1/ Attended Wednesday's session only.

Messrs. Madigan and Simpson, Associate Directors, Divisions of Monetary Affairs and Research and Statistics respectively, Board of Governors

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

Mr. Dennis, 2/ Assistant Director, Division of Reserve Bank Operations and Payment Systems, Board of Governors

Messrs. Reifschneider 3/ and Small 3/ Section Chiefs, Divisions of Research and Statistics and Monetary Affairs respectively, Board of Governors

Ms. Kole, 4/ Messrs. English 4/ and Rosine 4/ Senior Economists, Divisions of International Finance, Monetary Affairs, and Research and Statistics respectively

Ms. Garrett, Economist, Division of Monetary Affairs, Board of Governors

Mr. Evans, 2/ Manager, Division of Reserve Bank Operations and Payment Systems, Board of Governors

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

Mr. Conrad, First Vice President, Federal Reserve Bank of Chicago

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

Messrs. Altig, Bentley, and Rosengren, Vice Presidents, Federal Reserve Banks of Cleveland, New York, and Boston respectively

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2/ Attended portions of meeting relating to the examination of the System Open Market Account and changes to the domestic securities lending program.

3/ Attended portion of meeting relating to the Committee's consideration of its monetary and debt ranges for 1999.

4/ Attended portions of meeting relating to the Committee's review of the economic outlook and consideration of its monetary and debt ranges for 1999.

Transcript of Federal Open Market Committee Meeting of
February 2-3, 1999

February 2, 1999 – Afternoon Session

CHAIRMAN GREENSPAN. Good afternoon, everyone. Before we get started, I would like to welcome Bob Rasche, the new Director of Research at the St. Louis Bank. Also, it has been brought to my attention that today is Bill Conrad's fortieth anniversary of service at the Chicago Bank. [Applause] It is a rare event when somebody can tolerate the rest of us for that long!

We will start off, as we do in the first meeting of each year, with the election of officers. I will turn the gavel over to Governor Rivlin to bring us a Chairman and Vice Chairman for this year.

MS. RIVLIN. Thank you. It is not clear by what authority you were making those announcements! [Laughter] I would like to open the floor for nominations for Chairman of the FOMC. Governor Kelley.

MR. KELLEY. After long and careful consideration, I nominate Alan Greenspan.

MS. RIVLIN. Is there a second?

SEVERAL. Second.

MS. RIVLIN. Any discussion at this point?

MR. BOEHNE. I would like to hear Governor Kelley's long and careful reasoning!

MR. KELLEY. That's confidential!

MS. RIVLIN. All in favor say "aye."

SEVERAL. Aye.

MS. RIVLIN. Opposed? I believe we have a Chairman.

CHAIRMAN GREENSPAN. I thank you, everyone.

MS. RIVLIN. Since I still have the gavel, I will entertain nominations for Vice Chair of the FOMC.

SPEAKER(?). I nominate President McDonough of the New York Fed.

MS. RIVLIN. Good idea.

SEVERAL. Second.

MS. RIVLIN. Any further nominations? All in favor say “aye.”

SEVERAL. Aye.

MS. RIVLIN. Opposed? We have a Vice Chair.

VICE CHAIRMAN MCDONOUGH. Thank you all.

CHAIRMAN GREENSPAN. Democracy works again. I would like to ask Normand Bernard to read the list of potential staff officers.

MR. BERNARD.

> Secretary and Economist, Donald Kohn;
> Deputy Secretary, Normand Bernard;
> Assistant Secretaries, Lynn Fox and Gary Gillum;
> General Counsel, Virgil Mattingly;
> Deputy General Counsel, Tom Baxter;
> Economists, Michael Prell and Karen Johnson;
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> Associate Economists from the Board: Lewis Alexander, Peter Hooper, David Lindsey, Larry Slifman, and David Stockton.
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> Associate Economists from the Federal Reserve Banks:
> Stephen Cecchetti proposed by President McDonough;
> William Hunter proposed by President Moskow;
> Richard Lang proposed by President Boehne;
> Arthur Rolnick proposed by President Stern; and
> Harvey Rosenblum proposed by President McTeer.

CHAIRMAN GREENSPAN. Would somebody like to move that list?

VICE CHAIRMAN MCDONOUGH. So move.

CHAIRMAN GREENSPAN. Is there a second?

SEVERAL. Second.

CHAIRMAN GREENSPAN. All in favor say “aye.”

SEVERAL. Aye.

CHAIRMAN GREENSPAN. The ayes have it. The next item on the agenda is the selection of a Federal Reserve Bank to execute transactions for the System Open Market Account. That, of course, has traditionally been the New York Bank, and unless I hear objections, I will presume that the Committee has again authorized the same Bank.

Next is the selection of the Manager of the System Open Market Account. Our incumbent is Peter Fisher. I assume that his nomination is acceptable to the New York board?

VICE CHAIRMAN MCDONOUGH. It is indeed.

CHAIRMAN GREENSPAN. If there are no objections except mine, [laughter] I will assume that the Committee is again authorizing our incumbent, Peter Fisher.

We have an examination report on the System Open Market Account. Are there any questions on that report? If not, I will assume that it is acceptable without objection.

Next we have a review of the System's security lending program and a related proposal to amend the Committee's Authorization for Domestic Open Market Operations. Peter, would you like to review briefly what this involves?

MR. FISHER. Yes, let me mention a few points, if I may. The Committee reviews the Authorization for Domestic Open Market Operations at the first meeting each year. I have proposed an amendment to the Authorization for the Committee to consider. You have a rather lengthy memo from me on the subject. There are a few points I would like to try to cover again. I think I could have done a better job in the memo in providing a clearer contrast between the existing program and the proposed program. Let me try to do that very briefly.

Under the current program we lend securities for one week. We do it in accordance with the rather low limits on bills and coupon securities as described in the memo. We charge a flat fee of 150 basis points, regardless of the security's current value in the market, and there is a prohibition on short selling. That is, we are not supposed to lend to dealers who have sold the security short, even though that is virtually impossible for us--and in some cases for the dealer--to determine with accuracy.

A major change we are proposing is that instead of charging a flat fee, we would hold an auction with a minimum reserve fee of 100 basis points. In effect, for the dealers who want the security, this provides an allocation mechanism that involves something other than a first-come first-served, helter-skelter basis of who calls the Desk first. An auction is also a mechanism that allows us not to waste public assets, so to speak. That is, when we charge a flat fee of 150 basis points for something that is worth more than 150 basis points "on special" in the Treasury financing market, we are giving away System property, if you will, by accepting less income than the System could receive.

The second change that we are proposing is in the limit structure. Instead of the rather low limits, higher limits are proposed, as explained in the memo. The most important shift is from the one-week term of the lending to overnight lending. I don't think I underscored quite enough in the memo what an important shift that would be. I have previously described to the Committee my concern that any change in this program should not simply move both the demand and supply curves out equally. That would not accomplish very much. The longer we thought about this, the more we realized that the willingness of dealers and market participants to short securities is really based on term financing. No one shorts a security and plans to finance it through a series of overnight borrowings. They think in terms of one-week or longer time periods when they are trying to finance their short sales. That is where the demand and supply for shortening securities come from. By limiting the System's lending to an overnight program where transactions occur only at noon, which is rather late in the day, I think we would do a better job of providing a lending facility that addresses clearing issues and keeps the market moving, without encouraging dealers to short securities. We are trying to stand apart from short selling activities.

On the 25 percent limit that I suggested we begin with, we would actually be lending less than we are lending currently, as a rough-cut calculation. I noted that I would clearly expect to raise that limit somewhat as I saw increased demand, but I certainly would not do so without talking to this Committee. As I also indicated in the memo, it is hard to imagine raising that limit at any one auction to anything higher than 50 percent of our total holdings in an issue.

We think of the proposed program changes as enhancements that will better enable us to achieve our existing objectives. These changes are designed to provide a little grease for the clearing mechanism and to enable the dealers to avoid some of the games that go on when a security is so scarce that borrowing it has essentially the same cost as failing to cover. Then people may not try to cover shorts at all and that creates some perversions.

That is the nature of the proposed program. As we have designed it, it is still intended to be a limited program. I would be happy now to answer any questions about what I have just said or about any aspect of the memo that I circulated to the Committee.

MR. BROADDUS. Peter, thank you for the memorandum. It was very detailed and complete. In a sense, the memorandum presents this as an operational issue, but it seems to me that this proposal is closely related to broader issues about how we manage our portfolio and where along the maturity curve we operate and so forth. There is something of the sentiment of the old "bills only" controversy that the Committee had around this table many years ago. I have a comment that is perhaps half observation and half question. The memo seems to imply that in order to run monetary policy effectively and engage in open market operations effectively, we have to operate all along the curve including issues of longer maturity. I am not sure that is true. It seems to me that we could run monetary policy entirely, if we needed to, by operating only at the short end of the curve.

The question I have is: Doesn't this proposal raise some potential problems and issues? It seems to me that by getting involved in this kind of operation, we could become engaged in arguments as to why we decide to make a loan of securities in a particular case and not make one in some other case. Whenever we conduct one of these operations, especially if it involves a thinly traded issue, we are likely to affect prices. And in such a situation, somebody is going to lose and somebody is going to gain. I don't think it is too much of a stretch to think that conceivably some moral hazard issues might arise if we conduct lending operations on a regular basis. I just wanted to throw that out and ask if you have thought about some of these broader issues in addition to the more detailed technical issues that you covered in the memorandum.

MR. FISHER. It certainly was not my intent that any aspect of the program would suggest anything about the maturity structure of the portfolio; and if the memo suggests that, I want to correct that misimpression. In fact, the demand for borrowing comes as much from the bill sector as the coupon sector. So, I really think this proposal is independent of the structure of the portfolio. We could talk about that, and we have in the past, but I think this proposal stands apart from that debate.

On your second point, we have tried to establish a set of rules that will avoid our using any discretion. I am not sure I would characterize the issue as involving a moral hazard problem. I want a set of rules that will enable this procedure to operate every day without our having to make any discrete decisions affecting prices or changing our behavior. If we were to change any of the program's major features, the big change would be to move from overnight lending to, say, one-week lending. I would imagine that in a situation like the Drexel crisis, we would have to come back to the Committee to propose such a change. I would add that we probably have had a rather bizarre, if marginal, impact on current prices by giving away the scarcity value of the securities to whatever dealer happens to call the Desk first in the morning. So, while the lending program clearly has some impact on the price-setting process, I think the open auction feature of the new program will result in a more transparent and less egregious impact on prices.

MR. BROADDUS. I think the proposals in the memorandum are an improvement over present procedures. There's no question about that. I am really asking the basic question of whether we need to engage in this activity at all. According to market analysts, the market is rather liquid and deep. Do we really need to do this?

MR. FISHER. The short end of the market currently is not very deep, though I know we all come with habits of mind about "relative to what." In fact, the bill market is as tight as a drum, and the Treasury supports the proposed change. As I have noted a couple of times, we have a bit of "after you, Alphonse" on whose proposal this is. They do not want to be telling us to do it or not to do it. Their interest in this actually is focused on the short end because the bill sector is so tight that if we decide to lend a little more in that area, they think that would be helpful. That conclusion is based only on my conversations with Treasury officials. As I pointed out in the memo, if we had wanted to get out of this business in the late 1980s and early 1990s on the grounds that the market was very deep and liquid and we really didn't need to lend securities, that could have been a compelling argument. But we have seen a decline of 25 percent in the number of primary dealers in the last two years. Issue size is contracting. As I will discuss later in the day, the spread between the on-the-run and the twice off-the-run 30-year bond is still at 20 basis points. This moment in history, when the markets are going through this supply-shock transition, would seem to be a rather awkward time to say these markets are deep and liquid and can take care of themselves. That would be my counter to the argument you are making.

MR. KOHN. I think one could also argue that an entity that holds a huge portfolio of Treasury securities and is not allowing them to be lent on the market in itself creates potential distortions. We are a very large part of the market. Certainly, the Federal Reserve has been concerned about price distortions in the Treasury securities markets, dating most recently at least from the Salomon Brothers case. There is the potential for shortages in that market to distort and reduce liquidity over time. This proposal is in my view an attempt through the auction technique to keep the Fed out of the price-setting process except when the shortages are quite acute and fairly large overall. I view it as a public policy objective to keep those shortages low and to promote liquidity in the market in which we operate.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. I don't have any objection to the proposed program, but I might understand it better if the following were explained: What difference would we see in the marketplace if we did no lending at all versus lending as outlined under this proposal? Tell me what I would look for with and without the lending.

MR. HOENIG. May I add to that question? You mentioned in your memo, Peter, that at a time of market crisis it had proved helpful in the past to raise the lending limits above those that were in place. It would help me to understand this issue if you explained that.

MR. FISHER. At the extreme, one is worried about--I hope I can get all of my signs right--the problem that arises when the specials price approaches zero. That occurs when a security is so scarce that to get me to lend the security to you, you have to give me the cash collateral for free. At the Desk, we lend bonds against other bonds as collateral because cash collateral would drain reserves from the banking system and we want to avoid that; however, the market practice is to use cash collateral. Once the specials rate goes to zero, everyone in the market who has a short position in that security is encouraged to "fail." There is then a tendency for the problem to escalate because those who have an obligation to unwind short positions and deliver the securities to others have an economic incentive to do nothing and create a series of "fails"--failures to settle. The multiplier effect kicks in and worsens the adverse market impact. The result is a series of fails that generally make life miserable and divert attention from price discovery to back offices and lead to settlement shortages and unsecured positions. And this situation creates other perverse incentives. I imagine you get the picture. So, at the margin we are trying to reduce the frequency with which that happens.

When I first brought up this issue at the May meeting last year, I think it was President Hoenig who asked me whether we could do all this discreetly. Could we just lend securities when it looked as if we were on the cusp of a problem? But as we thought long and hard about it, that seemed to pose the moral hazard issue that we are now discussing. What is the right specials price? That is, we would be deciding when to interject ourselves, and we would end up intervening in the Treasury market in a manner similar to our intervening in the foreign exchange markets, trying to pick a level and decide when to intervene. We don't want to go that route. That would create big problems for us. So, if we want to have some impact on the margin, we think the better way is to use this lending device and do what we can with our large supply of securities.

Now, in the spirit of this, let me be clear. This relates to what Don said. With the hats that the Committee and the Treasury have given me, I am engaged in market surveillance to prevent the next Salomon Brothers episode from happening. I go around giving talks to dealers, telling them that if they have a long position, they ought to be lending it back into the market. Well, we have a long position and a lot of securities. If we are concerned about the smooth functioning of the markets and if we think good behavior of portfolio managers involves being on both sides of the market to help keep it deep and liquid, then I think we have a duty in that regard, too. We really live in the financing market. That is where our operations are. And I think we owe something to the market to help keep it as liquid as possible. So, that is the positive reason. I have also described what we will be trying to avoid, which is the risk of fails and specials rates approaching zero. That happens from time to time, and I don't want to say that we are going to prevent that from happening. But at the margin should we be leaning against that with our large portfolio? I'd say "yes."

Let me go back to the bills we now hold in our portfolio. Having sat still and not bought a bill in a bill pass for a couple of years, we have gone from owning 23 percent of bills outstanding to 30 percent. That illustrates how much Treasury issuance has contracted. So, in the bill sector in particular, we may really have something to offer in terms of trying to keep the market liquid. And that market does indeed have a very close connection to the money market in which we operate.

MR. BROADDUS. Peter, I certainly am not trying to give you a hard time. I understand the kind of pressure you are under, dealing with these people day in and day out, and I know you feel you have certain obligations. The difference is that we are the central bank, and there are sensitivities that I hope we will be very aware of. The memo tries to deal with some of these problems; it really does. But it makes me nervous that we have this kind of relationship with this market. I think it is risky over the longer run.

MR. PARRY. But, Al, you do think this proposal is preferable to what we do now?

MR. BROADDUS. Yes, absolutely. I was raising a broader question.

CHAIRMAN GREENSPAN. Further questions for Peter? Would somebody like to move the Treasury securities lending authority he is requesting?

VICE CHAIRMAN MCDONOUGH. I move the authority that is requested, Mr. Chairman.

CHAIRMAN GREENSPAN. Without objection, so ordered. The next item on the agenda is the review of the Foreign Currency Authorization, the Foreign Currency Directive, and the Procedural Instructions with respect to Foreign Currency Operations. Are there questions for Peter on the memorandum, which I assume all of you have read? If not, would somebody like to move approval of the changes he has proposed in the memorandum?

VICE CHAIRMAN MCDONOUGH. Move approval.

CHAIRMAN GREENSPAN. Without objection. Finally, before we get to the main substance of the meeting, you have received a memorandum from Don Kohn on proposed changes to the Program for Security of FOMC Information. Are there any questions for Don?

MR. KOHN. I would like to clarify a few points, Mr. Chairman, if I may.

CHAIRMAN GREENSPAN. Why don't you go ahead.

MR. KOHN. I was trying to respond to a series of issues that have arisen over the last couple of years in the course of the investigations of leaks of confidential FOMC information and in conversations with Committee members and staff. In this proposal we are trying to accomplish a couple of objectives. One is to make clear that confidential information extends beyond the physical or even electronic documents that people possess into what one learns at FOMC meetings--the informational content of meetings. Our intent is to define better what is confidential.

Secondly, we want to facilitate policy discussions among staff at the Reserve Banks and here at the Board and between Committee members and the staff. So we recommend reclassifying the Bluebook to Class II to give it a wider circulation and clarifying that Committee members and Board and Bank senior staff can have conversations about research issues that arise at meetings with staff who do not have Class I clearances. Conversations like that can occur. Those conversations would not be about what happened at a meeting, or who said what, and would not be about the results or the vote but about research issues that need to be pursued between meetings.

Thirdly, we want to protect the confidentiality of the decisionmaking process and the policy decision itself by continuing to classify the directive, the transcript, and the draft minutes as Class I documents. We would continue to limit the number of people at each Reserve Bank who can see those documents to about 4 or 5--basically the people who are authorized to attend meetings. There is some confusion about this in the document itself, and we will try to clear that up. The new program also avoids a confusion that apparently existed about the distinction between what is currently Class I and who is authorized to see the directive. So, we are shrinking the number of Class I documents by taking the Bluebook out of that category. We are making Class I more clearly aimed at what goes on at FOMC meetings, the most confidential information that people have.

Finally, after reading through this and getting comments from several people around the room, I recognize that some points still need to be clarified. We weren't as clear as we could have been in every case. I would appreciate having comments either at this meeting or after the meeting from Committee members and the staff around the room. I would suggest that the best way to proceed would be for us to incorporate your comments, clean up the draft, and get back to the Committee in March with a cleaner draft that says what we want it to say. If you don't vote on this today, the current program will continue in effect for another seven weeks until the next meeting. So, it's not as if we wouldn't have something in effect. That would be my recommendation, Mr. Chairman.

CHAIRMAN GREENSPAN. It seems reasonable. Does anybody have any objection to that? Let's do that then.

MR. KOHN. If some people have comments, I'd be happy to hear them.

MR. BROADDUS. I have just one quick comment. I worry a little about the degree of restrictiveness being proposed for what is now going to be Class I, which involves any discussion of what actually happens at a meeting. If we limit Class I information to four people, as I understand the proposal, at my Bank that would mean me along with Marvin Goodfriend and only two other people. The way we operate now, I involve five or six people in discussions that get into this kind of detail, and this change would be limiting for me. There is also the matter of involving new people, giving them incentives to get interested in policy and become more knowledgeable about what goes on at these meetings, because at some point they will have to take over. I would hope that in reviewing this proposal, you will think about that aspect. That is the one point that I really choke on.

CHAIRMAN GREENSPAN. Is there a way to have a general set of rules and then, under certain conditions, to have temporary alterations or rules that endeavor to address a specific situation? That strikes me as the type of issue you are raising, President Broaddus.

MR. KOHN. There is already in these rules, Mr. Chairman, the authority to make exceptions for specific situations. I think President Broaddus is raising a broader issue about how many people normally have access to these documents.

CHAIRMAN GREENSPAN. What I am trying to say is that I can conceive of the number of people given access as being flexible, depending on the particular situation and circumstances. We might be wise to be sensitive to that because the purpose is not to withhold information from those who should have it within the System but to classify it. The obvious way in which we could restrict information is to make certain that nobody knows about it by passing out amnesia pills at the end of each meeting! There has to be some balance here. It is a tough balance to determine.

MS. MINEHAN. I talked with Don about this a couple of times. Based on your comments, Don, I assume you plan to do away with the current arrangement in which the same group of people who brief a Reserve Bank President also know the outcome of a meeting. You are proposing wider access to the Bluebook which in the future will no longer include the directive; a smaller group would be allowed to read the directive; and an even smaller group could discuss what went on at the most recent meeting.

MR. KOHN. I think that second distinction would go away. Its inclusion was an error and is one of the things I would clean up. The directive would be Class I, so the distinction between Class I and directive access would go away. The second investigation by the Inspector General pointed to the limited access to the directive as one of the rules that a lot of people were confused about. I think that if we can correctly set the number of people who should be given access to information about policy discussions at meetings, that distinction would not be necessary and should be eliminated.

MS. MINEHAN. Let me then put in a request that we take one step back and ask ourselves how much sense this makes. How many people in most Banks get access to all the policy alternatives and are part of the very intimate group of people who are advising the President on what he or she should do at the meeting? Can we ask ourselves whether it makes sense not to let all those who advise the President know what went on at a meeting? I know the rule limiting access to the directive existed before and a lot of us didn’t know about it. I am questioning that rule.

MR. KOHN. Obviously, it is up to the Committee whether it wants to give more people access to information about what goes on at meetings. Maybe that’s a choice we could give the Committee at the next meeting: How many people do you want to have access to Class I information? You know the risks on both sides. We were trying to make a distinction between knowing what went on at a meeting in the sense of what issues arose and what staff work needed to be done versus knowing what went on in terms of information that could cause a problem if leaked to the newspapers.

MS. MINEHAN. I know. Obviously, there have to be restrictions. But to treat as outsiders, in terms of what went on at a meeting, people one considers part of one's close circle or people who are involved in discussions of the issues one brings to the table really does not sit very well with me.

CHAIRMAN GREENSPAN. Communicate to Don whatever issues you would like to raise. We will try to close this at the next meeting, but it may spill over to the meeting after that. The ultimate requirement is to get general agreement on all of this.

We will now go to the substance of the meeting and our regular meeting format. Would somebody like to move approval of the minutes of the December 22 meeting?

VICE CHAIRMAN MCDONOUGH. Move approval.

CHAIRMAN GREENSPAN. Without objection. Peter Fisher, you have the floor.

MR. FISHER. Thank you, Mr. Chairman. I will be referring to the package of colored charts that begins with the chart on 3-month deposit rates. You should have that package somewhere in front of you on the table. [1]/

> The charts depict forward rate agreements as they have traded over the past seven months since July 1st. As you can see in the top panel for the United States, the 9-month forward 3-month rate has been rising rather consistently since November. That trend continued in January, with some fits and starts, and that rate is now above the current 3-month rate, while the 3-month forward rate is trading just below current rates. The point of interest here, I think, is that the positive spread in the 9-month forward over the 3-month forward is now the widest since June 1997. For the first time in the period shown in this panel, expectations are upward sloping, with the 9-month forward trading above rather than below the 3-month forward.
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> Looking at the middle panel--for Germany or the euro zone--I think the continued fall in both the current and forward rates reflects the expectation that the European Central Bank will respond to signs of weakness in the continental economies with further easing, even if that occurs a little later this year. The weekend conversion to the euro went quite smoothly, as did our conversion of 32.4 billion of System and Treasury holdings of deutschemarks into 16.4 billion of euros. There were some problems related to volume in the European payments system and the target system that links the national payment systems. This caused

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[1]/ A copy of the material used by Mr. Fisher is appended to the transcript. (Appendix 1)

some frustration with lags in moving funds around the euro zone, but those seem to be working themselves out now after a month of transition.

Looking at the bottom panel for Japan, the 9-month forward Japanese 3-month rate backed up a fair amount in late December and into January and has been trading as much as 20 basis points over current 3-month rates. There is much going on in Japanese money markets that I don't pretend to understand, but the simple point I have come to understand is that since October Japanese government T-bill rates have backed up approximately 30 basis points. Having come off their zero and below zero levels, they have backed up 30 basis points in a period when the Ministry of Finance has increased bill issuance by about 20 percent. This increase in bill rates seems to have flowed through to the money market.

On January 11, with dollar/yen having broken through 109, the Japanese authorities intervened by purchasing This seemed to provide some stability to the exchange rate at around 111 or 112. Last week the yen traded up toward 115 on the increasing perception of the U.S. economy's robust performance. It is back down to around 111 to 112 this week. There is still a fair bit of noise in the dollar/yen market but, again, I wouldn't pretend to understand why.

Instead of focusing the rest of my remarks on the Japanese economy or the U.S. equity markets or Brazil, which have received a fair amount of attention in our own written reports and elsewhere, I thought I would focus on two areas that have been getting less attention. Nevertheless, these areas have generated a great deal of uncertainty as well. The first is how to price the dollar/euro and the second is how to price fixed income markets in general.

On the second page you will see a 10-year history of a synthetic euro, based on a methodology developed by Hong Kong Shanghai Bank. There are a number of methodologies out there, but over the 10-year history there is not much difference among them. This chart is for broad-brush purposes. A basic fact to keep in mind is that the euro is quoted in dollars per euro. The dollar was weakest--at the top of the chart--in 1992 when it traded at almost $1.50 per euro; it was strongest--at the bottom of the chart --in 1989 and 1997 when it traded through $1.05. To give some perspective, we have indicated weeks in which the U.S. authorities intervened in dollar/mark, but we did not include dollar/yen interventions. They are not marked here, but clearly there were occasions when we intervened in dollar/yen, and that intervention had a rather strong impact on dollar/mark as well. This just lists the dollar/mark interventions to provide reference points.

My point in bringing this to your attention is, first, that there seems to be relatively little awareness in the markets about how strong the dollar has been recently; it traded around 10-year highs during most of 1997 and 1998. Secondly, it is not at all clear what people mean when they say that they expect the euro to be a strong currency. Do they mean that they expect it to trade above its launch rate of about 1.18? Do they mean that they expect it to trade up into the 1.30s during a normal cycle? Or do they mean that they expect its average rate over the next 10 years to be higher than its average rate over the past 10 years? The fact of the matter is that people speak rather loosely about this. That reflects, in my view, a great lack of conviction on how to price this currency. Even though people think they know about dollar/mark, dollar/euro is really a different animal. To give you some flavor of that lack of conviction and the jitteriness in the markets: In the first week of the euro's existence, it lost a cent because the target system closed one hour late.

Mr. Chairman, at the last meeting you asked me if I could explain the differential between U.S. and U.K. swap spreads and those on the continent, and I feebly mumbled something about central bank trading. On some reflection, I would not want to hang my hat on that answer. I know that staff at the Board and New York have tried to come up with some explanation, but we are still uncomfortable with our lack of understanding of that phenomenon. One reason I am uncomfortable is that the longer I look at the relationships, the more I realize how much I don't understand about the underlying relationships among government bond yields, which are shown at the top of page 3.

The top panel shows the yields since last July 1 on U.S., U.K., Italian, French, and German 10-year government bonds as well as the yield on the U.S. Treasury inflation-indexed 10-year bond, which is depicted by the dotted red line. You can see that there was quite a rally in European government bond markets in November and December. That brought us to the moment on January 5, which was the day before an auction of new U.S. inflation-indexed 10-year securities, when the yield on both the outstanding Treasury indexed security and the outstanding Italian government nominal 10-year bond stood at an identical 3.94 percent. While the U.S. inflation-indexed yields have fallen about 15 basis points since then and the Italian nominal yields have traded sideways, both German and French government 10-year bonds have traded through the U.S. inflation-protected 10-year rate.

We know that the pricing of our inflation-indexed security is problematic, but the problems are likely measured in tens of basis points. I don't pretend that I have a magic rule here, but we know we are dealing with a premium for illiquidity and in particular for the tax treatment that the dealers complain about quite a bit. But there must be something happening on the European side of this equation as well. The optimists in Europe would like to explain the low government bond yields as a reflection of the rush of capital into the euro and the confidence that global investors have in the ECB. Others, perhaps more plausibly at least so far, suggest that the declining yields reflect the deteriorating outlook for the continental economies. But if the euro's own economies are as weak as these yields suggest, where are the tax receipts going to come from to help these governments avoid issuing a lot more bonds?

To make the general point, let me offer what is clearly my own opinion: That fixed income markets have been slow to recognize that the so-called short-run supply/demand dynamics have recently been having a much bigger impact on yield curve movements than have changes in inflation expectations, at least over the most recent period. Consider the U.S. Treasury market over the last 2 years with decreases in new issuance and the flight-to-quality buying. Consider the Japanese government bond market over just the last 2 months.

There is also considerable unease in the U.S. government bond market. In the bottom panel, you can see that the Brazilian shock had relatively little impact on spreads that were greatly affected by the events of last August, September, and October. The traders in U.S. Treasuries are still not at all comfortable. Liquidity remains at a very high premium. The bottom red line shows that the twice off-the-run spread is still around 20 basis points, as contrasted with the 2 to 5 basis point spread that had prevailed for most of the last 5 years until the events of the past few months.

Again, let me make clear that I am offering my own opinion. While the events of last fall effectively knocked fixed income markets off their then-existing equilibrium, markets have not yet found a new equilibrium that they are comfortable with. I don't mean to suggest that markets are fragile, but I do mean that they are still groping and do not have a great deal of conviction about their pricing of fixed income instruments. It would be fair for any member of the Committee to point out that I may be having problems getting supply and demand right in my own backyard of the fed funds market!

Turning to the next page, let us go over our operations in the domestic markets for the last several reserve maintenance periods. In the two periods depicted in the top two panels, we set out to be quite generous--to lean against the tightness that we had been seeing during the late fall and in early December and against the normal year-end funding pressures. We then found that our generosity in supplying reserves was heavily supplemented by unanticipated weather-induced float from the winter storms across the Midwest and the Northeast. In the first maintenance period, our generosity was aimed at avoiding a firm end-of-period settlement date, which we feared might set us up for a tight year-end that coincided with the first day of the settlement period. We debated at some length among ourselves how best to prepare the market for the December 1999 year-end Y2K event. We debated whether we should be intentionally generous to calm anxieties or intentionally stingy to engineer a tight close this year in order to encourage everyone to think they had better lock in their funding in advance for the next year-end. We chose the generous route and were rewarded at least in one sense with a noticeable decline in the 1999 year-end premium, as evidenced by futures prices over the last couple days of the year.

In the second period, bad weather contributed to especially high, unpredictable float and we drained reserves aggressively on several occasions. In the third maintenance period, I have only myself to blame for the softness. I thought we had room to do a term operation of modest size and thereby avoid the need to operate each day with overnight RPs of different sizes and still leave room for any additional float or change in other factors. I was either wrong or unlucky or both, and we ended up with a little more float and a soft rate through the middle of the period.

Overall, I am glad that we now have the long-term RP in our tool kit, and I thank the Committee for adding it. We are going to continue to reflect on our experience of this past year-end as we begin to plan for the coming year-end.

Mr. Chairman, I will need a vote to ratify our domestic operations, and I would be happy to answer any questions.

CHAIRMAN GREENSPAN. Are there questions?

MR. JORDAN. Peter, I probably should know this from something else you have sent us, but when you converted our holdings of securities denominated in deutschemarks to securities denominated in euros, what did you do?

MR. FISHER. We did a series of foreign exchange trades with ourselves, which is really what everyone did to convert. These are not done with any counterparty. We just take out all the assets denominated in marks and then put them back in denominated in euros, asset by asset. Then the challenge is to confirm that with all our counterparties and custodians down the supply chain, if you will, to make sure we get to the same numbers. But essentially the conversion involved a rather rudimentary process of doing a foreign exchange trade with oneself; that was the case for us and for all the market participants.

CHAIRMAN GREENSPAN. You leave us hanging. Did you check to see if it worked?

MR. FISHER. Yes. I meant to cover that. I did say that our conversion went quite well; maybe I covered that too quickly. We were among those who experienced some of the glitches in the new European payment system. We were holding our breath sometimes to make sure we did not fail on our delivery of euros while waiting for the queue to work through, but we avoided any problems with that. The real issue came in the first week when the German payment system did not seem to be up to the volume, which is curious because the volume was much reduced. The Germans had put through some changes in their own domestic payment system simultaneously with the shifted target. That taxed the capacity of the German payment system and there were some bottlenecks.

MR. JORDAN. The portfolio now has euro-denominated deposits at the Bundesbank, euro-denominated German government securities, and euro-denominated deposits at the BIS?

MR. FISHER. Yes, and euro-denominated repo agreements with our counterparties, with Deutsche Bank as our custodian.

MR. JORDAN. Okay. Under what circumstances would we wind up having in the portfolio euro-denominated obligations of other taxing authorities besides the Germans?

MR. FISHER. We will not, until this Committee discusses whether I should buy some other assets. That is, we are limiting our repos to German government instruments. I think I mentioned some months ago that we will see how the markets develop, and we may come back to the Committee to discuss diversifying. In particular, the French short end is much more liquid, so the issue is whether we would want to migrate there if we want our holdings to be more liquid. The Desk will not make that decision--the Committee will make it--though we may recommend going one way or the other. I already have a list of people from non-German EU government finance ministries who want to come visit with me. I am very much looking forward to being able to say: "I'm happy to consider your proposal but I have to talk to the FOMC before we make any decisions."

MR. JORDAN. Thank you.

CHAIRMAN GREENSPAN. Incidentally, I noticed that the issuance of euro bonds in the international market in January exceeded the issuance of dollar-denominated bonds and exceeded the combination of those denominated in the previous currencies that went into the euro. Is this a short-term, one-time adjustment? Or are we looking at the longer-run impact of presumably narrowing bid-ask spreads on the euro vis-à-vis the predecessor currencies? In short, does the introduction of the euro represent a major development in the international bond markets or one that is going to fade once the one-time impact dissipates?

MR. FISHER. That is a well phrased question. My view is that a lot of issuers want to test the market quickly. That is, we are talking about the issuance of new bonds. Everyone wants to get in because in their sector of the euro market they can be the benchmark, just as all European governments are debating who is going to be the benchmark. If Philips or whatever corporate entity can get in and create a name for itself, will it have a leg up on others? Some corporations may find it works very well for them, and they may expand their program. I have a sense that it's a matter of "Let's try it and see how it goes." If I followed your question, I'm not quite sure I see a smooth transition from that to how the euro/dollar exchange rate will trade and what its bid-ask spread will be.

CHAIRMAN GREENSPAN. No, I wasn't referring to the exchange rate. I was referring to the notion that as the aggregate issuance of euro securities increases, one would expect the bid-ask spread in the single euro currency to be narrower than the average bid-ask spread in its predecessor currencies. Even though differences still exist with respect to taxes and even though there are all sorts of other concerns, the liquidity differences presumably will narrow the average euro bid-ask spread, and that should increase both the demand for and the supply of new issues in the euro market. The question I am putting to you relates to my recollection that the predecessor currencies accounted for 30 to 35 percent of the issuance market but in January issuance in the euro market was 40 percent of the total. Now, that can be either an indication of the broadening of the market or the mere novelty of it. Perhaps people who had been thinking of doing an offering in deutschemarks decided to wait another few weeks to do it in euros. That's the nature of my question.

MR. FISHER. Right. I think the January effect we are observing is a curiosity effect. Your other hypothesis may well prove right over time, but I don't expect a smooth movement from where we are now, given what happened in January.

CHAIRMAN GREENSPAN. Is the increase in the offerings, which effectively means going short in euros, a factor in the euro's decline from its initial offering price?

MR. FISHER. That is something some of us have speculated on. I don't think we have firm evidence that there will be a lot of borrowing by people who don't live in the euro zone, since they have to take their proceeds out. So, the first-run effect of such borrowing would be to weaken the euro. Some of us have been telling ECB and NCB officials for some years that having a deep and liquid capital market is not a one-way-up ticket for the exchange rate, and I think there may be some of that. I still ascribe the thinness of the market and most of the tentativeness in exchange rate trading to that.

CHAIRMAN GREENSPAN. Further questions?

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I move approval of the domestic operations.

CHAIRMAN GREENSPAN. Thank you. Approved without objection. Let's move on to the Chart Show and Messrs. Prell, Alexander, and Stockton. Gentlemen.

MR. PRELL. Thank you, Mr. Chairman. I will start the presentation. We will be referring to the package of charts entitled "Staff Presentation on the Economic Outlook," which may be at the bottom of the pile of papers in front of you. [2]/

> Chart 1 provides a basic summary of the staff economic forecast. As you know, the BEA published its advance estimate of fourth-quarter GDP on Friday; it was a half point above our 5 percent guess. However, given that the BEA numbers do not really point us in a different direction--and they are only tentative, in any event--we have stuck with the Greenbook figures for our presentation today.
>
> The top panels of the chart show our projection for real GDP, on a four-quarter percent change basis. We are looking for a substantial deceleration, from 4 percent in 1998--4.1 percent, according to Friday's

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[2]/ A copy of the material used by the staff is appended to the transcript. (Appendix 2)

report--to around 2½ percent this year and next. As the bars in the left panel indicate, the slowing is entirely accounted for by domestic spending: The negative contribution from net exports is expected to diminish considerably over the forecast period.

Though the growth of output is much slower, it is pretty close to our estimate of the trend rate for potential, so that the unemployment rate--the red line in the middle panel--changes little from where it was last quarter. The chart also shows the movements in the factory utilization rate. Over the past year, we observed the odd pattern of the plant utilization rate dropping somewhat below its long-term average even as the jobless rate was reaching a 28-year low. We are anticipating that these indicators of supply pressures will continue to send conflicting messages, each of them changing little on net over the next two years.

As Dave will be discussing later, we have given greater weight to the labor market tautness in arriving at the inflation forecast shown in the bottom panel. We foresee a noticeable pickup in the pace of price increase over the next two years--about a percentage point as measured either by the CPI or by the GDP chain index.

Chart 2 presents some of the financial backdrop for this projection. The basic assumption is that the federal funds rate will be unchanged through next year. As you can see in the top panel, given our forecast of rising inflation, this implies a further decline in the real funds rate--proxied by the nominal rate minus the recent inflation rate. In fact, it is not at all clear that inflation expectations have come down as far as actual inflation in the past year, so this measure may overstate the current level of the real rate--and consequently may exaggerate the decline that lies ahead. But I would characterize our forecast as incorporating a real short-term interest rate that is at the low end of the range since 1995.

The real short rate is scarcely an unambiguous or comprehensive gauge of the financial impetus to demand, so it is worthwhile to look at a few other indicators of credit market conditions. The picture is mixed. In the middle left panel, you can see that nominal yields on Treasury and investment grade corporate bonds have fallen over the past couple of years--probably by more than longer-term inflation expectations. Junk bond yields also eased a bit until the market was jolted by the Russian default shock last summer. The junk rate index plotted here is now up roughly 1½ percentage points from a year ago, suggesting that the typical low grade firm is facing a considerably increased long-term borrowing cost.

The senior loan officer survey--the basis of the right panel--indicates that businesses also are facing a little less friendly reception at commercial banks, with loan underwriting standards having been tightened some in recent months, especially in the case of larger firms.

Credit has not dried up, however, as may be seen in the bottom panel, which plots the real debt growth of households and businesses combined. Through the fourth quarter, the end of the solid portion of the line, debt growth remained rapid. We are forecasting a moderation, but this is scarcely a credit-crunch scenario--as might have been feared for a while last fall. Lenders have turned a bit more cautious, but most of the explanation for the projected slackening in debt expansion comes from the demand side.

If there are corresponding signs of increased caution in equity markets, they are rather difficult to find. Share prices have continued to soar, and where they are headed from here clearly is a crucial question for the economic outlook. The top panels of Chart 3 don't answer that question, but they provide some provocative perspective by comparing the performance of the U.S. stock market in the 1990s with a couple of other impressive bull markets of yesteryear--Japan in the 1980s and Wall Street in the 1920s. Given the amount of artistry involved in choosing the base periods and thus aligning these curves, I would recommend taking the pictures with at least a grain of salt. But, if you have a taste for salt, perhaps they are suggestive of some of the risks confronting us.

The middle panels come at the issue from an angle that is perhaps a bit more analytical. At the left, I have repeated an exhibit I've used in prior presentations to demonstrate why share prices had to peak soon. Perhaps you should stop me before I do it again! [Laughter] The latest observations are rough approximations, given yesterday's prices and our estimates of earnings through year-end. The S&P 500's aggregate P/E is at an unprecedented level. And, to underscore the abnormality, it has achieved this multiple not when earnings had a cyclical upturn in front of them but rather, as you can see in the bottom left panel, when the profit share of GNP has risen to a multi-decade high. And, if the S&P multiple is remarkable, that for the NASDAQ composite--at the right--is astonishing, moving rapidly toward triple digits!

Although some analysts would say--indeed, have said--that earnings are beside the point in valuing stocks in this New Era, we have not been able to break the habit of looking at them--which may help to explain our forecast errors. I have shown, in the bottom right panel, annual percent changes in NIPA corporate profits--the black line--along with those for S&P 500 earnings per share. The accounting concepts and coverage of the two series differ, but they have tended to move together. In that light, the divergence between our forecast of NIPA profits in 1999 and the S&P predictions of Wall Street strategists is worth noting. It suggests that the market will continue to have to cope with earnings disappointments in the months ahead. If we had an adequate sample of the Wall Street expectations for 2000, I suspect that the story would be reinforced. Such disappointments have not stopped the market to date, but we have assumed that--from such high valuations--it will be difficult to extend the uptrend in prices.

If we prove to be anywhere close to right about the trend from here, the market will cease to provide the impetus it has to spending over the past couple of years. Chart 4 summarizes some of the key considerations in our forecast for domestic demand. Because these are familiar stories, I shall just run through the list very quickly.

The upper left panel highlights the fact that though we have the wealth-income ratio declining, the lags in the effects on spending lead us to expect that consumer outlays will continue to grow faster than income for a while longer, pushing the saving rate still lower. But spending growth does moderate.

In the housing market--depicted at the right--we expect that with mortgage rates remaining near current levels, the monthly payment burden of home-ownership will remain attractively low. This should keep housing demand from falling sharply as income and wealth growth weaken.

In the business sector, the slowing of output growth, depicted in the middle left panel, will turn the accelerator effects on capital spending negative. But that should be partly offset by the favorable effect of a continuing decline in the relative price of equipment--charted at the right.

Inventory investment, the red line in the bottom left panel, is expected to move pretty closely with final sales. Not much of a story there.

And, finally, government purchases are projected to run a little stronger on balance over the next two years. In the state and local sector, surpluses are growing to the point where we would expect to see some greater expenditure on infrastructure. In the federal sector, real purchases are expected to come closer to bottoming out, with some obvious upside risks in defense and other outlay categories. The pickup in government spending, however, is only a modest offset to the slackening in the growth of private demand that we foresee.

Lew will now shift the focus from the domestic side to the external sector.

MR. ALEXANDER. The main changes in our forecast on the international side have been driven by events in Brazil. Our previous assumption that Brazil's exchange rate peg would hold has obviously been proved wrong. Your next chart focuses on recent developments in Brazil and highlights the key policy problems facing the Brazilian authorities at this time. As can be seen in the upper left panel of Chart 5, the Brazilian real depreciated by more than 40 percent in the last three weeks through last Friday. The real has appreciated about 8½ percent following the announcement that Arminio Fraga, a former intern in the Division of International Finance, [laughter] would replace Francisco Lopez as the head of the Brazilian Central Bank.

Early in January, a dispute over intergovernmental debts between the state of Minas Gerais and the Brazilian Federal Government, though relatively insignificant by itself, highlighted the lack of consensus on the need for fiscal consolidation within Brazil's complicated federal political system. As the dispute threatened to widen to other states, pressures on the real mounted. On January 13, the Brazilian authorities attempted a controlled devaluation of 8 percent. Significant capital outflows continued and the real was allowed to float two days later.

The anticipated fallout from the collapse of the real--including continued high price-adjusted interest rates, heightened economic uncertainty, a greater burden of foreign currency denominated debt, and pressures on the financial system--is projected to cause a severe downturn in economic activity in Brazil this year. As shown at the upper right, we now expect the downturn in Brazilian GDP to steepen in the first half of this year and to extend, although at a diminishing rate, for the remainder of the forecast period.

Brazilian policymakers now face a dilemma. With the change in the exchange rate regime and the sharp devaluation of the real, it may be necessary to keep interest rates high to contain inflation. But Brazil's fiscal position remains precarious, owing in part to high debt service costs.

The red bars in the middle left panel indicate that Brazil's public sector borrowing requirement was over 8 percent of GDP last year, even with a modest surplus on the non-interest, or primary, part of the budget. Fiscal policy actions enacted since last fall are expected to increase Brazil's fiscal balance by about 3 percent of GDP this year. But a substantial overall deficit will remain unless interest costs decline.

Over the last year, domestic short-term interest rates in Brazil--the black line in the middle right panel--averaged about 28 percent, while inflation--the red line--was only about 3 percent. Roughly two-thirds of the government's domestic debt carries an interest rate that is linked to overnight interest rates. At the end of last year, Brazil's federal debt was already equal to about 50 percent of GDP, up from just 35 percent in 1996.

Persistent high interest rates could put Brazil's government debt on an explosive path. On the other hand, high interest rates may be necessary to contain inflation expectations. One of the critical uncertainties facing Brazilian policymakers at this time is the degree to which the recent devaluation will pass through to inflation.

The bottom two panels offer some perspective on this problem. The bottom left panel shows the exchange rate, domestic interest rates, and inflation for Mexico over the period from 1994 to 1996. In this case the sharp devaluation of the peso at the end of 1994 was followed by a burst of inflation that peaked at an annual rate of over 100 percent. The lower right panel shows the same three variables for Korea over the last two years. The devaluation of the Korean won at the end of 1997 was roughly the same magnitude as the devaluation of the Mexican peso, but in the Korean case inflation only reached a peak of about 30 percent. Before 1997 Korea had less historical experience than Mexico with either large exchange rate depreciations or high inflation, and this may have helped to limit the passthrough of the depreciation to inflation expectations and hence to domestic inflation itself.

Our forecast for Brazilian inflation over the next year falls somewhere between the Korean and Mexican examples. Empirical analysis of exchange rate passthrough in Brazil, covering the period before the adoption of the real plan in 1994, would have suggested a pattern more like the Mexican example. But over the last four years the Brazilian government has pursued policies intended to limit inflationary dynamics. For example, explicit indexation of wages was banned in 1995. Obviously, there is considerable uncertainty about our inflation forecast for Brazil.

Your next chart focuses on our outlook for other emerging market economies. Our current forecast does not anticipate extreme contagion to other emerging markets from recent events in Brazil. To some degree, this represents a change in our thinking, in that in our previous "worse case" analyses we assumed that a failure of Brazil's program would likely generate severe financial pressures on other emerging market economies. This change in our thinking reflects the fact that over the last several months financial markets have increasingly distinguished Brazil from other emerging market economies.

The top left panel of Chart 6 shows yield spreads relative to U.S. Treasuries, for Brazilian, Mexican, and Argentine Brady bonds. In the immediate aftermath of the Russian devaluation and default in August, these spreads generally moved together. But since December Brazilian Brady spreads have moved up more sharply than those for Argentina and Mexico. Domestic interest rates in Mexico and Argentina, shown in the top right panel, are up some since the middle of January, but these increases are modest compared with those seen in August and September.

Perhaps not surprisingly, the financial contagion from Brazil to Asian emerging markets is even more modest. Credit spreads for Korean and Thai sovereign bonds--the black and red lines in the middle left panel--ticked up when the real was devalued, but those increases have been reversed. The events in Brazil raised some speculation about the viability of currency pegs in Hong Kong and China, but these pressures were relatively mild. As shown in the middle right panel, the 1-month Hong Kong interbank interest rate has increased about 150 basis points since mid-January. Interest rates implied by offshore forward contracts for the Chinese renminbi moved up somewhat more but this was probably related to the Chinese government's decision not to give preferential treatment to foreign investors in the bankruptcy of GITIC, a failed Guandong investment company.

Our outlook for GDP growth for emerging market economies, other than Brazil, is shown in the lower right panel. The repercussions from Brazil's economic difficulties are expected to have negative impacts--lower exports to Brazil and some spillover of financial market pressures--on other Latin American countries. Consequently, we expect the rest of Latin America to suffer a recession in 1999, with real GDP in these countries falling about 1½ percent before rebounding 2¾ percent in 2000. In contrast, real GDP in all five of the so-called "Crisis Asia" emerging market economies--all of which experienced serious financial crises and sharp declines in output in 1998--is expected to bottom out and return to positive growth by the end of 1999. As you can see in the lower left panel, industrial production has already returned to positive territory on a year-over-year basis in Korea, and Thailand is not far behind. We continue to assume that Hong Kong's peg to the dollar will hold, but at the expense of somewhat higher interest rates. Accordingly, real GDP in Hong Kong is now expected to decline 2 percent in 1999. Real GDP in China is expected to grow by about 6 percent in 1999, a slower pace than estimated for 1998.

Your next chart presents the staff's outlook for Japan and Canada. We continue to be very pessimistic about the prospects for recovery in Japan. Since mid-November long-term Japanese government bond yields --the red line in the top left panel--have moved up more than 1½ percentage points, and the yen--the black line in that panel--has appreciated about 6 percent relative to the dollar. The sharp increase in bond yields followed the mid-December announcement of a 1999 budget and associated financing plans that envision somewhat greater fiscal expansion and greater bond issuance this year than most market participants had expected. The change in Japan's cyclically adjusted fiscal deficit, shown in the upper right panel, is expected to exceed 2 percent of GDP this year and to be about ¾ percent of GDP next year.

There are few signs of a reversal in the downward trajectory of underlying private domestic demand, however. In the fourth quarter of last year, housing starts and new car registrations fell to their lowest levels in over a decade, and the labor market remains depressed. Since the beginning of the year Japanese bank stocks--the red line in the middle left panel--have been buoyed by potential mergers and the perception that the Japanese authorities may be beginning to move more aggressively to reform the banking system. Such optimism may be premature. In late January, Moody's downgraded the long-term credit rating of five large Japanese banks, including Bank of Tokyo-Mitsubishi.

We project that Japanese real GDP--the black bars in the middle right panel--will continue to fall over the forecast horizon even with significant fiscal stimulus. Japanese consumer prices--the red bars--are expected to fall 2 percent in 1999, but part of this decline is the reversal of special factors that artificially elevated consumer prices at the end of last year.

Our outlook for other industrial countries is not so gloomy. Declines in commodity prices over the last two years put downward pressure on the Canadian dollar, shown in real effective terms as the black line in the bottom left panel, particularly in the first three quarters of last year. Given that we now project a pickup in both oil and non-oil commodity prices this year, we expect the Canadian dollar to appreciate somewhat against the U.S. dollar this year and next. Our outlook for Canada is shown in the lower right panel. Canada should register growth near 2½ percent this year and in 2000--the black bars--with only a modest uptick in inflation, as shown in the red bars.

The staff outlook for Europe is presented in Chart 8. Exchange rate strength has been an important factor in a tightening of monetary conditions in Europe over the past year and a half. The black line in the upper left panel shows a constructed series for the real effective exchange rate for the euro area, using the DM as an historical proxy. Although the real value of the effective euro has fallen since October, this move retraced only partially the steep appreciation that occurred following the outbreak of the Asian crisis in mid-1997. The real value of sterling--the red line--experienced an even greater appreciation, which started earlier, before it, too, eased somewhat in recent months.

The latest data suggest that momentum behind European growth has ebbed lately and the outlook for Europe has softened. This has been especially apparent in Germany, but has started to show through in other key European countries as well. As shown in the middle left panel, indicators of business confidence in both Germany and France--the black and blue lines, respectively--have fallen steadily since the spring of last year. Despite a sharp uptick in late 1998, U.K. business confidence--the red line--still is well off its early-1997 level. Euro-area labor market conditions improved somewhat last year, as illustrated by German and French unemployment rates in the middle right panel. But the declines in unemployment rates have been modest and, as activity has slowed recently, those rates have leveled off.

The upper right panel shows three-month interest rate futures in Europe. In view of increasing signs of deceleration in Europe, markets appear to have factored in a modest decline in euro-denominated short-term interest rates over the near term. Futures rates also suggest that market participants expect the Bank of England to cut rates further following substantial declines already implemented since October. The staff forecast is consistent with this pattern.

The European outlook for real GDP growth is summarized in the lower left panel. Growth in both the euro area and the United Kingdom should slow by about ½ percentage point this year before recovering somewhat in 2000. U.K. inflation, the top line in the lower right panel, should stay on target at 2½ percent. Although inflation rates will vary across the euro area, they should stay low on average and well within the target range of zero to 2 percent specified by the ESCB.

My next chart outlines the influence of the foreign outlook on the U.S. external accounts. The top left panel depicts trends in the value of U.S. exports to our principal export markets. U.S. exports to Europe--the black line--and to Canada, the green line, advanced steadily last year. Exports to Latin America--the blue line--remained relatively strong throughout 1998 as well. U.S. shipments to Asia--the red line--fell sharply last year. The jump in shipments in the fourth quarter to Asian markets was largely due to aircraft.

U.S. exports have been restrained by weak economic activity abroad and a strong dollar. Turning to line 1 in the table in the top right panel, we estimate that economic growth in the foreign industrial countries was below trend last year; we project that growth will pick up only slightly during the next two years. Strength in Canada and Western Europe will only partially offset the effect of the recession in Japan.

As shown in the middle left panel, the dollar had appreciated sharply in real terms during the past two years, by nearly ten percent against major currencies--the red line--and by more than 15 percent against those of our other important trading partners--the black line--before depreciating during the past few months. In our forecast, the dollar remains essentially flat in real terms, appreciating against the currencies of Latin America and depreciating with respect to most of the currencies of Asia and Europe. This assumption reflects a balancing of risks, with the prospect of strong U.S. growth tending to support the dollar and concerns about the widening U.S. external deficit tending to depress the dollar.

The middle right panel depicts the arithmetic contribution of U.S. exports and imports to U.S. GDP growth. Real exports of goods and services, the black bars, fell during the first half of last year before rebounding last quarter. We project that exports will decline again during the first half of 1999 and then stage a slow recovery. We project that imports--the red bars--will continue to advance at a slower, but still strong, pace this year and next.

The U.S. external accounts are plotted in the lower left panel. We estimate that the nominal U.S. trade balance--the red line--in current dollars in the fourth quarter recorded a deficit of $182 billion, nearly $70 billion larger than in the fourth quarter of 1997. With accumulating U.S. current account deficits and the resulting deterioration in the U.S. net international investment position, net investment income--the blue line--is projected to continue its decline through 2000. We project that the deficit in the current account--the black line--will increase to $374 billion in 2000 which, as shown in the lower right panel, is equivalent to 4.0 percent of U.S. GDP, noticeably above the peak reached in the 1986-87 period.

In recent months financial market participants have focused increasingly on the widening U.S. external deficits and their implications for the exchange value of the dollar. Your next chart considers the relationship between the value of the dollar over the medium term and the likely path of the U.S. net investment position--that is, U.S. foreign assets less U.S. liabilities owed to foreigners. The top right panel shows the ratio of the U.S. net investment position to GDP, on an inverted scale, over the next 20 years under two assumptions about the path of the real exchange rate. The black line shows the path under the assumption that the dollar depreciates, in real terms, at a rate of about 1½ percent per year after the end of the Greenbook forecast period. The projection is based on an updated version of the long-term model the IF Division used in its Current Account Sustainability project two years ago. One of the conclusions of that project was that a steady depreciation of the dollar of 1½ percent per year was sufficient to stabilize the net investment position. As the black line in the upper left panel indicates, that conclusion is no longer valid. The red line on the chart indicates that even a 3 percent rate of depreciation is not quite enough.

The main factors that change the basic result are shown in the upper right panel of the chart. First, the dollar has appreciated substantially relative to the baseline that was used in 1997. Second, the current account deficit over the last two years has been above the 1997 baseline. Finally, our new higher estimate of U.S. trend growth makes a substantial difference because the income elasticity of U.S. imports is estimated to be substantially higher than the income elasticity of the demand for U.S. exports.

The bottom two panels of the chart show the net investment position to GDP ratio and real effective exchange rates since 1980 for Canada and Australia. These are the only two major industrial countries that in recent decades have had negative net investment positions of the size we are projecting for the United States. In both cases their exchange rates have trended down but with considerable variation.

That these projections have changed so much over the last two years is indicative of the fact that in such long-run projections initial conditions matter a lot. Moreover, there is no way to know, as the experience of Australia and Canada suggests, exactly how large a country's net investment position could be, nor when the prospect of further deterioration would prompt a financial market reaction. But these projections do suggest that the potential problem for the dollar has gotten worse rather than better over the last two years, and the prospect of widening U.S. current account deficits is likely to exert downward pressure on the dollar at some point in the future.

Dave will now continue our presentation.

MR. STOCKTON. Your next few charts focus on the aggregate supply side of the economy, beginning with a question raised at a number of recent meetings, "Just how low is inflation?" The upper left panel of Chart 11 displays the four-quarter changes in two alternative measures of consumer prices, the PCE chain price index--the black line--and the CPI--the red line. Prior to 1995, these two indexes increased at roughly the same pace, on average. Since then, however, PCE inflation has been running consistently below that of the CPI, with the difference last year about ¾ percentage point. For the measures excluding food and energy, shown at the right, the gap was even larger last year--about 1¼ percentage points.

The middle left panel highlights the major differences between the CPI and the PCE indexes. One important difference is the aggregation formulas. The CPI uses fixed weights at both the detailed and more aggregate levels, while the PCE index uses weights that vary with spending patterns from period to period. All told, these aggregation differences account for about three-fourths of the gap between the reported inflation rates over the past couple of years.

A second difference is the scope of the two indexes. The CPI covers the out-of-pocket expenditures of urban workers, while the PCE measure covers total consumer spending. For example, PCE includes third-party payments of medical costs by insurance companies and the government. The PCE index also includes services provided to individuals by nonprofit institutions.

A third difference is that, while the PCE index is mostly constructed using components of the CPI, the BEA occasionally uses price data from other sources. Most prominently in recent years, they have been using a measure of medical service prices that has increased considerably less than the corresponding measure in the CPI.

Finally, the weights used in the indexes are developed from different source data; the CPI uses spending reported by households in the Consumer Expenditure Survey, while the PCE weights are derived from various economic censuses. One notable difference is that the weight of housing in the CPI is considerably larger than that in the PCE index. Because housing prices have been rising relatively rapidly, this has given an added push to the CPI. To get a sense of the importance of the weighting and price differences, we recalculated the CPI using weights derived from the PCE data and the PCE's measure of medical service prices. As you can see by comparing the red and blue lines in the middle right panel, this exercise suggests that about another ¼ percentage point of the difference can be accounted for by these factors.

The lower left panel lists some of the pros and cons of the PCE price measure relative to the CPI. Clearly, as a measure of the cost of living, the chain formula of the PCE index is superior to the fixed-weight structure of the CPI, because it avoids substitution bias. In addition, the PCE program has been more flexible in introducing new measurement techniques, and the index can be revised to incorporate new source data. For example, unlike the PCE index, the historical CPI data will never be revised to incorporate the geometric mean weighting that will be introduced this year. That said, the PCE price index does have one significant shortcoming and that is its reliance on imputed measures of service prices for some major components. These imputations, about 3½ percent of the total index, are not actual measures of market prices, but rather are BEA constructions, most using input cost information of questionable reliability.

These imputed prices have had a pronounced effect on the pattern of PCE inflation of late. The deceleration in core PCE over the past year is almost entirely attributable to the slowdown in imputed service prices.

As shown in the lower right panel, excluding these prices, the increase in core PCE was 1¼ percent last year, the same as in 1997. The bottom line of our analysis is that consumer price inflation almost certainly has been running below the rates suggested by the CPI, but the extent of the slowing suggested by core PCE is considerably less certain.

Of course, we think that even these low rates of measured PCE inflation are still biased upward; PCE prices suffer from many of the same deficiencies of quality adjustment that afflict the CPI. The shaded band in the upper left-hand panel of Chart 12 shows a one percentage point wide confidence interval around our estimate of the upward bias in the PCE price index, which we put at about ½ percentage point per year. By this assessment, we may well have been at price stability last year.

As may be seen, our projection anticipates some turnaround in inflation over the next two years. By 2000, total PCE inflation picks up about one percentage point and the change in core PCE increases by about ½ percentage point. Some of the acceleration reflects our expectation that imputed service prices will rebound from the unusually low increases of the past year. More important, we are anticipating some reversal of the favorable influences that have been helping to hold down inflation over the past couple of years. Food prices--the black bars in the middle left panel--are expected to be a neutral influence. But, retail energy prices--the red bars in the middle left panel--are projected to post modest increases over the next two years, after plunging in 1998. Moreover, core non-oil import prices--the middle right panel--are expected to register their first increases since 1995.

As Mike noted earlier, indicators of tautness in product and labor markets, as measured by capacity utilization and the unemployment rate, continue to diverge. As shown in the lower two panels, that difference does not appear to be a statistical artifact. Business reports on vendor delivery performance, the left panel, reveal few if any signs of production bottlenecks. In contrast, the percent of households that perceive jobs as plentiful--the black line on the right--exceed those reporting that jobs are hard to get--the red line--by a very wide margin.

Turning to the upper panel of Chart 13, tight labor markets have been an important factor driving an acceleration of real wages, measured here as ECI compensation per hour deflated by the nonfarm business price index. However, owing to low price inflation, hefty real wage gains have required only a modest acceleration in nominal compensation over the past couple of years. To be sure, favorable price shocks provided an extra boost to real wage growth that we are expecting to recede as these influences are partly reversed in coming quarters. But more fundamentally, we expect the legacy of the recent low inflation to put a lid on inflation expectations, and thus nominal wage demands, despite the tightness of labor markets.

The simulations presented in the middle panel highlight some risks surrounding this outlook. A model in which wages are a function of, among other variables, past consumer price inflation and the unemployment rate--the dashed blue line--projects increases in ECI compensation per hour that are even lower than the staff projection.

The picture is quite different, however, if wages are determined not by past price inflation or inflation expectations, but rather by the past momentum in wage increases. A model with these characteristics--the red line--projects a substantial acceleration in compensation per hour over the next two years. Barring a further increase in productivity growth, a step-up in labor costs of this dimension likely could not be absorbed entirely in business profit margins and would result in more serious upward pressure on price inflation than is envisioned in our forecast.

As you can see, the staff projection--the black line--is shaded toward the wage-price model. We read the statistical evidence as favoring this specification, but our projection is above this model because we are skeptical that inflation expectations have fallen as much as suggested by this model's straight reading of lagged prices. And, we remain impressed by the anecdotal reports that wages are under upward pressure.

In the lower panel, the staff projection for core PCE is compared with two reduced-form models in which price inflation depends on lagged prices and alternative measures of resource utilization. The staff price projection--the black dashed line in the lower panel--is a bit higher than a reduced-form model using the unemployment rate--the red line--largely because we do not believe some of the special factors that have held down core PCE, most notably the imputed services, will carry forward. An identical model that uses manufacturing capacity utilization as the measure of resource utilization, the blue line, suggests a more serious departure from the staff projection. Over the longer haul, the empirical evidence provides a slight edge to the unemployment rate formulation, though in the past couple of years the capacity utilization model has been closer to the mark. Taken together, the model results suggest that, while there may be some upside risk to our wage projection that could well feed through to prices, the low expected rate of factory utilization implies that the inflation risks are not one-sided.

Your next chart reviews the productivity projection. As you know, last spring we revised up our estimate of trend productivity growth--line 3 in the upper panel--to 1.8 percent at an annual rate. As may be seen on line 4, the investment boom of recent years has lifted considerably the pace of capital deepening--that is, the increase in capital per worker. And, the available data hint at some step-up in the growth of multifactor productivity--line 6.

The recent behavior of labor productivity appears to have conformed reasonably well with our estimate that some acceleration has occurred in the underlying trend. The middle panel shows our estimate of trend productivity (the thin black line), actual productivity (the thick black line), and a simulation of a productivity model that attempts to capture cyclical variation around that trend (the red line). As can be seen, simulated productivity closely matched actual last year.

The recent behavior of the unemployment rate also provides some support for our productivity assumption. The lower panel shows the actual unemployment rate--the black line--and a simulation of Okun's law starting in 1990--the red line. As you can see, the simulation using our estimate of potential output growth of 2.1 percent in the first half of the 1990s and 2.8 percent since then has tracked the unemployment rate closely in recent years.

While the recent data have been kinder to this aspect of our projection than many others, it's far too soon to feel confident. It should come as no surprise that putting additional breaks in our estimate of trend productivity improves the fit of these equations, and it is certainly possible that after we complete this business cycle our upward adjustment of the trend will have proven too optimistic. On the other hand, if we are in the midst of an ongoing improvement in the pace of technological advance or organizational efficiency, further upside surprises could be at hand. The greater productivity implied by last Friday's GDP release, if it should hold up through revisions, would provide some support to that view.

In assembling this Chart Show, we briefly contemplated dispensing with a discussion of our baseline Greenbook forecast in favor of presenting only alternatives, given that the experience of the past year might suggest that this Greenbook's alternative will be next Greenbook's baseline. [Laughter] In the end, we decided not to take that approach, but your next chart is offered in that spirit. Perhaps one of the largest risks surrounding the performance of the domestic economy is associated with the course of the stock market. In this chart, I consider the consequences of both a continued boom and of an abrupt bust in the market.

In the boom scenario, we have assumed that the gains in the stock market continue apace, with a decline in the equity premium sufficient to boost the stock market--the blue line in the upper left panel--by 20 percent in each of the next two years, all else equal. Monetary policy is assumed to respond to this shock according to the Taylor rule. In contrast to our baseline assumption of no change in the federal funds rate through the end of 2000--shown as the black line in the upper right panel--the stronger activity prompted by the booming stock market results in a 100 basis point increase in the funds rate by the end of next year. This tightening of policy leans against the strengthening of activity, but it is not prompt enough or large enough to prevent the unemployment rate--the lower left panel--from falling below 4 percent. Despite that, the inflation rate--the lower right panel--remains about unchanged from that in the baseline; in the model's view, the increase in interest rates would boost the exchange value of the dollar enough to offset the inflationary effects of tighter labor markets.

In the bust scenario--shown as the red line in all four panels--we have assumed an increase in the equity premium that would, all else equal, produce a 40 percent decline in the stock market by the third quarter of this year. In this simulation, the Taylor rule calls for a cut in the funds rate of 125 basis points by the end of next year. The unemployment rate rises to 4¾ percent by the end of next year. Again, the inflation rate is little changed from the baseline path.

In constructing these scenarios, I have deliberately kept the alternatives simple. In neither case have I allowed for any special disruptions to financial markets or to the real economy not already accounted for by the structure of the model.

However, if either scenario were to materialize, it is not difficult to envision a considerably more challenging policy environment. For example, a continuing boom could, at some point, spill over more noticeably into other asset markets--adding extra stimulus to activity and inflation. On the other hand, a steep decline in the stock market could have more adverse consequences for the behavior of capital markets and for credit provision than is embodied in these simulations. Moreover, if such a decline were to trigger an abrupt shift in the economic outlook of businesses or households, the risks of a sharp cyclical downturn would increase markedly.

The final chart presents your economic projections for 1999. The central tendency of your forecasts shows expected growth of nominal GDP of 4 to 4½ percent this year. This is accompanied by growth of real GDP between 2½ and 3 percent, leaving the unemployment rate in the 4¼ to 4½ percent range. The increase in the CPI is projected to be in the neighborhood of 2 to 2½ percent. Mr. Chairman, that concludes our presentation.

CHAIRMAN GREENSPAN. That was a particularly impressive performance by the three of you. I thought it most interesting in all respects. I found the results of the forecast scenario that assumes the largest change in stock market prices somewhat startling in the sense of how restrained the secondary effects were. If we look at the end result, we find that a stock market "bust" brings the unemployment rate to just over 5 percent. Five or six years ago we thought 5 percent was just terrific, an exceptionally low number. The inflation rate in that scenario is under 2½ percent. Again, that is something history would suggest is fully acceptable. So, if someone were to say that a bust in stock market prices would leave us with 5 percent unemployment and an inflation rate of 2½ percent, some might say "Bring it on!" That tells us something about our inability to create, with a limited number of equations, some of the history of past extraordinary events. As Dave Stockton pointed out, the endeavor to hold everything else the same is clearly misleading. Were these types of shocks to occur, I suspect the end results would be quite different. But it is very difficult to capture exactly what those results would be. Nonetheless, I think the forecast exercise is suggestive of the types of issues that are involved. Questions for our colleagues?

MR. MEYER. I have a couple of questions. First, on Chart 1, the inflation rate as measured by the CPI goes up almost a percentage point over the forecast horizon. In your opening comments, Mike, you said that you were leaning toward giving somewhat greater weight to labor market tightness in the inflation picture. Yet, as I look at the projected performance of the CPI, it seems to me that it is mostly driven by the dissipation of the declines in energy prices. The effect of labor market tightness is there only marginally in the next year. This year the labor market tightness is still being fully offset by other forces. Is that a fair statement?

MR. PRELL. The rise in oil prices that we have assumed is accounting for a very substantial portion of the overall CPI increase in the forecast. In thinking about the story in terms of underlying resource pressures, as Dave indicated, we have leaned more toward the unemployment rate as the indicator of resource pressures rather than capacity utilization. But the core price measures definitely do not accelerate the way the overall CPI measure does.

MR. MEYER. I had a question, too, about Chart 10, entitled "U.S. Current Account Sustainability." You talked about the factors that have affected the sustainability of the current account deficit since 1997, including the appreciation of the dollar and the deterioration of external accounts. It seems that many of these developments reflected cyclical phasing and the crisis in Asia, for example. So, I am wondering why at some point in the future--when the cycles in the United States, Japan and Europe become more in phase and we get to the other side of the Asian crisis--we won't recoup some of the losses in the current account. Are these transitory and related to the cyclical crisis or are they long-term structural changes?

MR. ALEXANDER. I think in part what you are picking up are the initial conditions and compounding effects. If we have a cyclical swing that makes the situation worse now and if the other economies come back later, we will in the interim experience a further increase in our net external debt position. And because of the compounding, that matters. An underlying assumption in the Greenbook forecast is that there will be some strengthening in foreign economic activity during the forecast period, but faster-than-trend growth abroad is delayed until the period beyond the Greenbook horizon. So, part of the problem is that if we have a boom and therefore a bigger trade deficit in the current account now, we will accumulate additional foreign debt; and the interest cost of that will mount. In part, therefore, the growing external deficit is the effect of the compounding.

MR. MEYER. That's a very good point. Just one last comment: I was a little surprised in Chart 15 by the limited impact on inflation of whether there was a positive demand surprise or a negative demand surprise. The Taylor rule, with the exchange rate consequences, just offsets that. Was that not surprising to you?

MR. STOCKTON. Yes, it was.

MR. MEYER. Okay. Thank you.

CHAIRMAN GREENSPAN. Incidentally, as I think you are aware, the implicit assumption for the crude oil price embodied in the forecast does exceed the price implied by the forward futures market for the rest of this year and next. If you had substituted the market's estimate for the staff's estimate, would that have made much of a difference in the CPI forecast?

MR. STOCKTON. It would have taken a couple of tenths off the forecast. Our price is just a dollar or so higher than the market's, so the effect would be a tenth or two. If one wanted to assume that oil prices stay flat going forward, that would take another couple of tenths off, roughly speaking. The assumptions we have made on both the import price side and on the oil price are critical factors in explaining the upturn we have forecast in inflation.

CHAIRMAN GREENSPAN. There is a wage/price interaction, which means that the change in the crude oil price gives us a multiplier in the inflation rate. Are you counting that in the 0.2 and 0.3 or are you doing just a direct accounting translation into the product prices in the CPI?

MR. STOCKTON. We are doing the full accounting. On PCE price inflation, flat oil prices and, let's say, 1 percent slower non-oil import price inflation would take about 0.2 off the forecast we are showing in 1999 and 0.4 off in 2000, including all of the feedback effects.

CHAIRMAN GREENSPAN. That is what I am getting at. It is a full simulation effect. I would presume that if the price of crude oil went down, it would have even more of an effect. So, in a sense a not insignificant part of the forecast is dependent on an endeavor to make judgments about a very difficult issue. We do the best we can, but it is important to realize that we could be wrong on either side of that. We could very readily get an increase in West Texas Intermediate to $15 a barrel, and that would make a difference; or it could go down to $9 a barrel and that would throw the whole forecast off. It is important for us to recognize that so we can monitor this and make certain we make some good judgments about where we are. President Parry.

MR. PARRY. Mike, I want to ask you a question about the performance of equity markets over the last several years. Typically, one talks about that in terms of earnings and P/E multiples. Does it make sense to focus on risk premia in equity markets and look at it from the viewpoint suggested in some of the studies by Ibbotson and Sinquefield? Those studies indicate that over the longer term there is a significant premium in equity markets in the sense of a greater return on equities than on risk-free Treasuries that is mainly a reflection of the risk premium. Is there reason to think that over this period as a result of persistent growth of earnings and volatility--perhaps almost all in one direction--that the market's perception of the risk in equity markets may have changed? If that risk premium is coming down, obviously a given trajectory of earnings could have a powerful impact on the level of equity prices. It's another way of talking about P/E multiples that has a little more analytical basis, I think.

MR. PRELL. It certainly has an analytical basis. It is an abstract notion that is unmeasurable.

MR. PARRY. That is why it's worth spending time talking about it.

MR. PRELL. Yes. One of the active hypotheses is that investor perceptions of the holding periods over which they need to assess the volatility in different assets may have changed, so that investors are not as preoccupied with the greater short-run volatility of equities as they were historically. People may have recognized that they had been giving up excessive amounts of yield historically by avoiding equities, given this new perception of risk. That might make higher valuations sustainable for given earnings trajectories and interest rate levels. That said, we are really squeezing these things down by some estimates to very, very narrow risk margins. And there is a certain euphoria that one senses in the markets; people may be exaggerating the safety of equity investments. So if a shock occurs that jars investors out of this complacency, if that's what it is, we could see a reversion to wider equity premia that, on top of more realistic earnings expectations, could result in a very marked adjustment of equity prices. I might note that the simulations that Dave Stockton presented were concocted basically by assuming changes in the equity premium. So it is essentially a totally autonomous shock of this sort that leads to these numbers.

MR. PARRY. Thank you.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you. The bottom panel of Chart 13 shows a set of projections, one of which uses the capacity utilization equation. I believe you commented that recent history would seem to be a bit more consistent with this view of the world. That raises in my mind the fact that manufacturing capacity focuses on a relatively narrow part of the economy. Have you thought about other factors that this measure might be picking up? Is it a proxy for something? If you wanted to explain why it seems to work, what explanation would you offer?

MR. STOCKTON. I would say it works principally because the manufacturing sector is the most cyclical component of the entire economy and therefore involves enough variation to pick up some correlation with what is going on in product markets more generally. It certainly amplifies, in some sense, what is happening in product markets more generally. But your basic observation that this is focused on a very narrow portion of the economy is precisely what makes us hesitant to go the full distance toward this model. We know that in the current circumstances, given what is happening to our trade accounts, there should be special stress in the manufacturing sector and that, therefore, it might not be as reliable an indicator of overall economic conditions as it has been in the past when we have not seen such disparate behavior between the goods sector and the rest of the economy.

MR. PRELL. I doubt that there is much that I can add to Dave's expertise on this, but one thing we have talked about among ourselves is whether the models that we use really pick up the importance of the dollar and import price movements. Given the confluence of events recently and the way they have impinged on the manufacturing sector, this alternative is perhaps picking up a bigger import-price effect than is manifest in the model simulation we have used for the unemployment rate version of the Phillips curve.

CHAIRMAN GREENSPAN. What happens if you use the GDP gap instead of the unemployment rate?

MR. STOCKTON. The outcome is quite close to the unemployment equation results.

CHAIRMAN GREENSPAN. Doesn't that address President Stern's question?

MR. STOCKTON. It does that except one has to remember that the way we construct the GDP gap is basically a version of Okun's law. It is a little more complicated than that, but it does not bring much additional information to bear relative to what is already incorporated in Okun's law.

CHAIRMAN GREENSPAN. In order words, these are two independent methods, and the combination of the two doesn't add anything?

MR. STOCKTON. Right.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. I have a quick question of fact on financing conditions in the U.S. corporate bond market. I should know the answer, but I don't. Roughly speaking, what fraction of the new issues is at the lower-rated end and what fraction is at the higher-rated end? Your chart emphasizes the corporate junk bond rate, and that is up substantially. How important is that quantitatively? I'm just asking for a ballpark figure on that.

MR. PRELL. To be honest, I don't have a good number in mind. It has varied considerably over time. The table on page III-2 in Part II of the Greenbook shows the gross issuance of bonds by U. S. corporations in 1998. Sales of investment grade issues averaged $14 billion a month, whereas those at the speculative grade were $9.5 billion per month.

MR. POOLE. So the percentage breakdown is roughly 60/40.

MR. PRELL. If one wants to take into account the degree to which these data represent refinancing, this becomes a tricky question to deal with. One of the problems in trying to examine the changes we've seen in credit market conditions over the past year is that the variations depend not only on a firm's credit rating but on which institution it turns to for financing and also the maturity range. Take, for example, a non-prime borrower looking at bank loans, where the money market rates have been coming down considerably. Even if the spread widened a bit--and it may not have yet--the firm might still be borrowing more cheaply at a bank as opposed to trying to sell securities in the bond market. The cost may not be unambiguously higher.

It is a very difficult situation to assess. My judgment would be, taking the totality of this picture going forward with our stock market assumption, that we do have perhaps a modest degree of overall financial restraint. But it is hard to read at this point, and thus you might not have discerned a clear-cut bottom line in my presentation. I think it is a mixed bag.

CHAIRMAN GREENSPAN. We have fairly detailed information on the outstanding stock of debt by credit ratings. I think the median is just at the edge of investment grade versus noninvestment grade.

MR. PRELL. I suspect so.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. I am back on the bottom chart on Chart 13, and my question is an offshoot to Gary Stern's question. There is a lot of uncertainty about the NAIRU. I believe your equations have it in the low to mid 5 percent area, perhaps 5.3 or 5.4

percent. This chart actually helps to get at a question that I have worried about, which is: How important is that uncertainty? I think one might take the capacity utilization equation as a proxy for things about as they are now, as if we are roughly at the NAIRU. Your wage projections would be based on the notion that we are substantially below NAIRU. So I think the answer to my question is that over a period of a couple years we get about l percentage point more in inflation depending on whether this NAIRU assumption is 5½ or 4½ percent. Is that roughly correct?

MR. STOCKTON. Over this two-year period that is exactly in line with the basic rules of thumb, yes. It is certainly true that there is enormous uncertainty in all these estimates. Indeed, in terms of the capacity utilization type equations, we are in essence below the model's estimate for the natural rate of capacity utilization. It might even suggest, as this simulation indicates, that there could be some further downward pressure on inflation if that in fact were the measure of overall resource utilization.

MR. KOHN. In the Bluebook, Governor Gramlich, there is a simulation with a 4½ percent NAIRU, which does exactly what you said. The economy is at equilibrium. Nominal and real rates are where they need to be and inflation ends up about ¾ of a percentage point lower than in the baseline.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. I found the paper that you circulated on the PCE versus the CPI measures very interesting, and the charts are interesting as well. What I found myself asking, however, was this: If price stability is characterized by people not taking inflation into account when they are engaging in decisions--along the lines of the Chairman's definition of price stability--it is not clear to me which of these measures does a better job of measuring the inflation that people perceive and care about. For a long time we thought it was the CPI; in fact, I thought that was what the CPI was constructed to do. There obviously are technical as well as nontechnical reasons to prefer the PCE. But some aspects of that measure seem very arcane to me in terms of whether people really see what is going on. Have I missed the point here somehow?

MR. STOCKTON. I think the clearest area where the PCE has that kind of problem is that it includes prices associated with nonprofit institutions such as religious organizations and other charitable organizations. If prices in those areas are changing because the statisticians are imputing prices for labor costs and so forth, I don't think that affects anybody's expectation very much. Clearly, one might argue that the nonmarket price portion of the PCE is not so relevant.

On the other hand, I think that most people probably are not looking only at their out-of-pocket expenditures in considering what is happening with the overall price situation. For example, in the area of insurance costs they might very well care about third party payments or the part that the government is picking up. I view the weighting structure in the PCE as clearly superior and probably closer to what most people perceive. It does not involve a fixed market basket of goods that people were consuming five or six years ago but is more a period-to-period type of weighting structure that probably is much closer to what people perceive is happening.

CHAIRMAN GREENSPAN. Are you saying that the CPI or the PCE weighting is better?

MR. STOCKTON. The PCE weighting is probably more appropriate and closer to most people's thinking than the fixed-weight structure of the CPI.

CHAIRMAN GREENSPAN. Well, let's assume that the CPI weighting is wrong, because it clearly is a sample and people make very poor judgments as to what the weights are with respect to what they spend. But that is indeed what they think they are doing. The point is that their perception of the inflation rate may be wrong from an economist's point of view. But if you view it in the context of the point President Minehan is raising, it is an interesting question of whether their perception is the relevant one or not. Remember that in the University of Michigan Survey, for example, their view of the rate of inflation is usually higher than it is in reality. The broader question is whose perception matters--the perception of the business community or the consumer community? I thought the memo demonstrated conclusively that the true rate of inflation is far better measured by the PCE. But the question you are raising is a different one.

MS. MINEHAN. Yes, it is a different one.

MR. STOCKTON. I would add just one comment on that. Part of the difference in reporting in the consumer expenditure survey that is used for the CPI is probably deliberate. It is not necessarily a misconception. The fact is that consumers significantly underreport their consumption of alcoholic beverages and tobacco. Now, it could very well be that they just don't remember. [Laughter]

CHAIRMAN GREENSPAN. There is some evidence that suggests that the more you drink, the less you remember!

MR. MCTEER. And the less you care!

MR. PRELL. People certainly remember how much they paid for that last pack of cigarettes. I suspect that even if they are underweighting it in the survey, it is on their minds.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. I want to ask about the last chart because it goes into the Humphrey-Hawkins report and does get some attention from the public. I was struck that the central tendency on the real GDP numbers and on the CPI numbers stayed the same as those we had last summer but the nominal GDP range went down. That implies, I suppose, that our idea of what deflator is appropriate was revised down compared to what we thought last July.

MR. PRELL. We don't get the members' estimates of the deflator. I must say that, when I look at the numbers you give us, I can see that in some cases people are not distinguishing between the CPI and the deflator in getting to the nominal GDP number. People may have been on top of that more this time than at a prior time. There is, I think, a considerable looseness in these numbers. Also, we simply eliminate the high three and low three from the individual distributions to get the central tendency and there can be a lack of coherence across the components in some instances. I don't know whether that was the case, but that distortion can creep in.

MR. JORDAN. Last Friday's report on economic activity in the fourth quarter had nominal GDP growth at 6½ percent?

MR. PRELL. Yes, it was 6½ percent.

CHAIRMAN GREENSPAN. Incidentally, speaking of Humphrey-Hawkins, I ought to remind you that Mike Prell will accept revisions to your individual forecasts through the close of business on Monday, February 8. Are there any further questions for our colleagues? If not, would somebody like to start the go-around? President Parry, you have been drafted.

MR. PARRY. Mr. Chairman, the Twelfth District economy expanded at a strong pace in 1998 and entered the new year with substantial momentum. Initial estimates indicate that total payroll employment in the District grew by 2.7 percent last year, nearly ½ percentage point faster than the nation. Following a slow third quarter, District employment regained lost momentum during the fourth quarter, when net hiring stepped up noticeably in the retail trade and construction sectors. However, the District's employment growth rate in 1998 was about one point below its 1997 pace and our growth rate advantage over the nation fell substantially. The key weak spot was the durables manufacturing sector, which was hindered by deterioration in the District's East Asia export performance.

Among subsectors, a sharp contraction in the aircraft and parts manufacturing sector has begun, with 3,600 jobs lost during the fourth quarter in Washington State and another 1,800 jobs lost in Los Angeles County during the past year. Manufacturers of computers and other high-tech equipment also had to face a slowdown. As a result, employment in the San Jose metropolitan portion of the San Francisco Bay area was flat during most of 1998.

Despite the slowdown in durables manufacturing in California, wage and salary growth in the state has been sustained by the creation of high-wage jobs in other sectors of the California economy. The largest contribution came from finance, insurance, and real estate, which grew rapidly in 1998. Among other states, Nevada and Arizona were at the top of the national employment growth ranking in 1998, and growth during the fourth quarter surged in Oregon, Utah, and Idaho, where it had fallen nearly to a standstill earlier in the year.

Turning to the national economy, our outlook has changed little since the December meeting. We continue to forecast a slowdown in real GDP growth to around 2¾ percent this year and unchanged core CPI inflation of 2½ percent or slightly less both this year and next. Along with the expected slowdown in growth, we have an assumption of an unchanged stock market price level, reflecting the random-walk nature of stock prices. In fact, the waning of the expansionary effect of past increases in stock market prices contributes to slower consumption growth this year. I suppose I should mention that we forecasted a similar growth slowdown last year, along with an unchanged stock market.

It is not hard to think of developments that could alter this year's outcome. Recent problems in Brazil serve to remind us of the potential downside risks stemming from fragility in many Asian and Latin American countries, as well as their implications for international and domestic financial markets.

But on the other side, last Friday's data on economic activity in the fourth quarter followed the familiar pattern of strong output growth and low inflation. It seems more and more likely that our economy is benefiting from a more rapid expansion of potential GDP, probably due to advances in technology. In fact, our staff has looked at a consumption-based measure of potential GDP, which has the potential to pick up shocks to the supply side of the economy. It shows a considerably faster expansion in potential output last year than do conventional measures. This factor also would help to explain why inflation has been so well behaved in the face of strong labor markets and why the stock market has been so strong. Thank you.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. The Seventh District economy generally continues to show trends similar to what I reported in December, namely strength in consumer spending and housing activity, mixed signals in manufacturing, tight labor markets, and a few signs that inflation will accelerate in the near future. Consumer spending remains healthy, boosted in part by robust activity in the housing sector, including refinancing activity.

Two of our directors, one a major bank credit card issuer and the other a major retailer, reported that consumers have been paying down outstanding credit balances, in part reflecting strong mortgage refinancing activity. Most of our retailers experienced better-than-expected sales during December, and that continued into January. Sales have been particularly strong for big-ticket items such as appliances, consumer electronics, and cold weather products. The blizzard we had in early 1999 forced some merchants to close stores temporarily, but the impact on sales for the month was said to be minimal.

Light vehicle sales were in the stratosphere in December but came back to earth in January. Some early January sales were included in the December figures. Inclement weather crimped sales a bit in January, but sales continued to be boosted by high incentives. Automakers have revised 1999 sales forecasts upward, although they still are not quite as high as in the Greenbook.

Continued strength in the motor vehicle industry, including heavy trucks where there is a 13-month order backlog, stands in sharp contrast to the weakness still being reported in our steel and agricultural equipment industries. In the steel industry, two small firms declared bankruptcy last year. Three more may do so in the first quarter of this year. A couple of recently opened mini mills are now up for sale. Among the major steel producers, half were still profitable in the fourth quarter, but all are likely to lose money in the first quarter. This will make it easier for the industry to demonstrate injury from steel imports. Production in the farm equipment industry this year is expected to be down 25 percent. Moreover, since Brazil is a major soy bean producer, the devaluation of the real will likely put downward pressure on prices and exacerbate conditions for our soy bean farmers and ag equipment makers.

District labor markets generally remain tight, although some easing is reported in locales affected by weakness in certain manufacturing sectors and in agriculture. In terms of prices, firms continue to report that as a result of intense domestic and foreign competition they lack the ability to raise prices. Firms continue to press suppliers for lower prices, and we had several reports recently of larger firms, both within the same industry as well as across different industries, establishing purchasing alliances to increase their bargaining power with suppliers. But some firms have managed to increase prices. Magazine advertising prices have been raised 5 percent. Also, several of our directors expressed concern about higher prices for construction projects.

I asked our directors to report on 1999 capital spending plans. It appears that a few of our District firms altered their capital spending plans in response to last fall's financial market turmoil. Changes that have been made appear to be driven by prospective business conditions. Y2K issues are not driving changes in their current plans at the moment.

Turning to the nation, our outlook for economic activity in 1999 has strengthened somewhat since our December meeting. Our analysis suggests that real GDP growth will be around 2.6 percent this year and that CPI inflation will be about 2.3 percent. Our forecast is similar to the Greenbook's, although the Greenbook has traveled a greater distance to get there than we did.

Last week we met with our Academic Advisory Council. They continue to look for a strong economy in 1999, with inflation remaining around 2½ percent. Though they indicated that the current setting of monetary policy is about right for now, they expect inflation to accelerate somewhat in the year 2000. I share this concern about accelerating inflation. As we have discussed before, the special factors that led to the 1998 CPI inflation rate of 1½ percent are not likely to recur this year. Since we see aggregate demand decelerating only to the growth rate of potential output, resource imbalances are unlikely to diminish soon.

Last fall there were very real concerns that the financial turmoil could negatively affect creditworthy borrowers and institutions. This Committee's aggressive actions were an appropriate response to those shocks. But if and when those risks diminish sufficiently, an appropriate response would be to move toward a more neutral policy setting. The uncertainties about the Brazilian situation probably mean that it is still too early to tell if its financial crisis has passed, but we may not be too far from knowing.

CHAIRMAN GREENSPAN. Incidentally, I have noticed that I am losing a number of you for coffee. Is that an indication that we ought to take a short break?

MR. POOLE. Do we deserve it?

CHAIRMAN GREENSPAN. Let's keep it to 15 minutes.

[Coffee break]

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. The situation remains about the same in New England. Labor markets are tight, with the regional unemployment rate at 3.2 percent in December. Connecticut and Rhode Island reported the two largest declines in unemployment among the nation's states in the month, and both states achieved new lows for this decade. Job growth continues to be slower than that for the nation as a whole, as it has been for most of 1998, and a wide array of businesses complain that a lack of workers, skilled and unskilled, hampers growth. Even manufacturing firms that are shrinking noted that labor markets are tight. Terminated workers do not remain out of work for long. One firm used furloughs around the holidays to avoid layoffs. They feared that layoffs would cause them to lose workers to other businesses and that they would face search, recruitment, and training costs to get new employees when they needed them.

Consumer prices rose measurably faster in Boston than for the nation as a whole throughout the year, with prices of food and medical care rising markedly faster--at a pace at least twice as fast in Boston as in the nation. However, tight labor markets and local price pressures did not seem to lead to rising wages generally, at least in 1998. But we continue to see large premiums being paid for workers in various skilled occupations.

At least part of the success in holding wages down has involved increased investment in capital goods. A wide range of firms, from dairy farmers to jewelry manufacturers, reported that they were increasing capital spending as well as engaging in in-house training and offering more incentive pay to offset the rising cost of labor and to make such labor more productive. Interestingly, while both retailers and manufacturers expect a slower 1999, most retailers and about half of the region's manufacturers expect significant capital expansions in 1999.

Real estate and credit markets are healthy. Residential real estate indicators exceed those of a year ago, with the market for newly built homes in the greater Boston area very strong and prices up smartly. On the commercial side, the speculative wind was taken out of the sails of developers and financers starting in the spring of 1998, after the supervisory warnings on REIT lending. Major developers and lenders both tell me that securitization may now be playing a role in stabilizing real estate cycles. The speed with which the market corrects the cost of financing makes projects less feasible more quickly than the more traditional process used by commercial mortgage bankers, who I am told never saw a building project they didn't love.

More broadly, credit spreads, while wider than at earlier points last year, do not seem to be shutting out borrowers. Moreover, lenders across a broad range of financial firms in Boston report very good conditions for their own profitability. One large insurer reported very solid yields on lending activity and the lowest rate of delinquencies in at least a decade.

Finally, amid the doom and gloom of reports about the U.S. agricultural industry, there is a bright spot. New England's dairy industry is reporting the best year ever. This is due to higher milk prices and lower costs for feed and other--I should hesitate to use this term--inputs. [Laughter] Even in dairy farming, however, there is a shortage of workers. One contact, a cheese manufacturer, is running his cut-and-wrap operation on a 7-day-a-week schedule and is speeding up installation of labor-saving devices.

On the national scene, the data we developed for our Humphrey-Hawkins forecast for 1999 differ very little from those in the current Greenbook, although we, like Chicago, had a little less far to travel. We, too, project a flat stock market and stable oil prices, and we see consumption and business spending slowing to about half the 1998 pace. Our forecast of overall GDP growth is a bit higher than the Greenbook's and the unemployment rate drops a bit even from its current low level. The continuing pressure in labor markets and the flattening of oil prices produce a modest rise in inflation, with both the core and the overall CPI rising to just below 3 percent by year-end 1999. In view of this, for the Humphrey-Hawkins forecast we have projected a modest tightening in mid to late 1999 and probably would see another modest tightening in 2000 as well.

Even with this, it is hard to imagine a more sanguine forecast than either ours or the Greenbook's. One has to wonder whether either is just too good to be true. We have all talked about upside and downside risks to Greenbook forecasts for the past year. However, the risks that have materialized all seem to have been on the upside. We have seen lots of growth, which is good, but lots of upward pressure on asset prices and labor markets, which could be bad. Moreover, since the financial panic last fall, credit and capital markets seem to have resumed financing just about anything, albeit with greater spreads than earlier last year and with increased volatility. Some fragility in these markets remains, but it seems quite small compared with the problems we seemed to be facing in October.

Arguably, monetary policy is stimulative, given the available liquidity in markets and the reduction in real interest rates brought about by the 75 basis points of easing in the fall. The question we have to ask is whether we really want to stimulate the economy right now or whether it might be prudent to bring policy closer to neutral, recognizing how difficult it might be to measure where neutral is. I do not say that because of a near-term threat of inflation. I say it because whether one thinks we face risks on the down-side from a large market break or from an international situation, or on the upside from continuing pressures on labor capacity and wages, stimulative policy right now seems to run a greater risk of making things worse later in terms of a big drop in the market--a bursting of the asset bubble, if there is one--or more price pressures, if and when they begin to build.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you, Mr. Chairman. The regional economy was very strong in the fourth quarter of last year, but that no doubt reflected the weakness at midyear associated with the auto strike. But it is creating what I think of as a ski jump effect. Inevitably we are going to reach a point where people's expectations are going to be disappointed.

The anecdotal reports suggest that people are expecting 1999 to be a stronger year than 1998, but that may just be a reflection of how strong autos, construction, and other sectors were as we finished the year. We are told that the backlog of presold, not-yet-built houses is at record levels and was rising as of year-end. Construction employment this year is expected, by the construction trade unions anyway, to exceed the levels recorded in 1998.

Overall, the labor markets continue to be very tight. One of the large regional banks that operates in a number of states in the Great Lakes region said that as of the end of last summer they had 3,000 open positions. In order to cut that, they significantly increased their use of retention bonuses. For example, any teller who was on the payroll on September 1, 1998 will get a $1,000 cash bonus if he or she is still on the payroll on February 28, 1999. I'm going to call in the early weeks of March and find out what happened after tellers get their bonuses! The company also was planning an across-the-board increase of 4 to 5 percent in base wages for 1999.

Reports from people in the retail sector almost never square with the subsequent data. That may reflect overcapacity in that sector or it may just be unrealistic expectations by the people in the sector. The retailers complained in December about warm weather hurting sales; then they complained in January about cold weather hurting sales. Even in the last week of December they were saying that retail sales were soft or disappointing and they subsequently reported that it was the best Christmas since 1984.

A director from the retail sector says that no matter what happens in 1999, we will hear retailers saying that it was not as good as 1998.

Bankers report that C&I loan demand is very strong. One of the regional banks said that at the end of the year loans in the pipeline were at the highest level ever, and they are now able to improve their profit margins. Earlier in the year they felt their margins were being squeezed.

Even the hard-hit steel industry struck a note of optimism recently. Steel prices in the fourth quarter of last year were said to have been down 6 percent on average from a year earlier but some view that as the bottom. That may be wishful thinking. And it was asserted that steel imports, especially from Japan, had peaked sometime last fall and are now declining. With consumption last year at a record and expected to be as high or better this year, steel industry executives are starting to turn optimistic. I agree with what Mike Prell said about the earnings numbers. LTV reported a big loss for the fourth quarter, but even they are less bearish going forward.

Turning to the national economy, I have the same problem with this Greenbook as I have had with other recent ones, especially for the Humphrey-Hawkins projection period, in that I like the Greenbook forecast; I just don't believe it. I continue to want to believe it because it looks so good.

For the first meeting of the year, I look back over the forecasts of the last several years. This forecast is now the highest current year forecast for real growth that we have had, at 2.6 percent on a fourth-quarter-to-fourth-quarter basis. That looks really good. It's higher than last year's 2.4 percent. The year before it was 2.4 percent and in 1996 I think the forecast at the first meeting of the year was only about 1.8 percent for the four-quarter period. Growth substantially exceeded that initial forecast in each of the last three years and inflation came in lower than projected. It's hard to beat that. It's easy to say: I want more of the same--faster growth, lower inflation. This is the first time in the last couple of years, though, where the unemployment rate is not rising in the current year and the out year. I also like that outcome, but I doubt that, given what we inherited from 1998, we have conditions in place that will produce that result again. Certainly in my region, but I think nationally as well, a significant portion of the surge in economic activity reflected an acceleration of final demand--fueled by what I consider to be very rapid growth in all of the reserve, money, and credit measures--to a pace that was associated in part with large and growing current account deficits. That, as the Chart Show illustrated, gave the appearance of a virtuous cycle of rapid growth, strong demand, and low inflation that cannot be sustained. Some components of that are going to start to reverse on us and will give us a disappointing result of less output and more inflation.

The longer we wait to start to rein in some of the nominal aggregate income growth and spending growth, the longer we are subsequently going to have to endure a period of very weak growth in output and employment in order to lean against the rise in inflation. So, at some point we have to contemplate an adverse transitory tradeoff, and I think the sooner the better.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. For the sake of variety let me start off by saying that not everything is great in our District. Agriculture is hurting in our region as elsewhere. The dairy farmers, as in Cathy Minehan's District, are doing better than the others, but overall the agricultural sector is very weak. Currency depreciations in a number of competing countries have really hammered apparel manufacturers in the Carolinas, and there have been some significant layoffs in that industry. So, we have a few holes in our region. But, by and large, our District economy is probably as robust now as at any time I can remember in my career. Even in manufacturing, which apart from agriculture is the weakest sector of our region, there are pockets of strength. The furniture industry in Virginia and the Carolinas, which has been in the doldrums for a long time, has been revived to a remarkable degree by the strength of new and existing home sales.

Elsewhere, consumer sentiment and spending remain very strong essentially across the board. We had a good holiday selling season, according to the anecdotal information anyway. There is a lot of speculative building in the Washington region, especially around Dulles Airport, and in several other cities in our District, notably Charlotte. Labor markets remain very tight except in the areas I mentioned a little earlier where there are some layoffs. State unemployment rates are below 4 percent in four of our six jurisdictions. Generally, the picture is pretty strong.

Let me make my comments on the national economy in the context of our Bank's Humphrey-Hawkins forecast. We are asked to submit a forecast based on what we regard as an appropriate monetary policy. I have always had a little difficulty with that procedure because in some situations I am not at all sure that the Committee, in its wisdom, is going to adopt what I personally think is appropriate monetary policy. It usually does not do that. [Laughter] In that case, my projection would be misinterpreted if somebody thought it was a statement of what I think is the most likely actual outcome for the economy over the year. So, a little less ambiguous and perhaps more informative way to proceed in my view would be simply to assume that there is not going to be any change in policy, and that is what I have done in generating our forecast this year. As it turns out, of course, that is the same assumption as the one underlying the Greenbook projection, but we do use a different model to derive ours, namely a small six-equation VAR model. We get broadly similar but somewhat different results: Our real GDP growth projection is 3 percent as against 2½ percent in the Greenbook; and we have a somewhat higher inflation rate of 2½ percent. At first glance, as we have been saying, both our numbers and those of the Greenbook look pretty good. But the 2½ percent CPI inflation rate we are projecting, while obviously a big improvement over what we had not too many years ago, still worries me. That is really the main point I want to make today.

The Labor Department has now corrected about ½ percentage point of the 1 percentage point upward bias in the CPI that is usually associated with the Boskin Committee Report results. So our 2½ percent CPI projection is equivalent to an unbiased projection of 2 percent, which I personally believe should be the upper bound of our tolerance range for inflation going forward. That seems to me as good a place as any to draw the line on inflation, given where we are now.

In this regard, it is worth noting also that the core CPI rate increased from 2.2 per cent in 1997 to 2.6 percent in 1998 on a consistently measured basis, which is not an inconsiderable move in the wrong direction. The lower PCE inflation numbers certainly are comforting to some degree, and I enjoyed the discussion about that today. But the fact is--and this is related to what Cathy Minehan was saying--the CPI is still the nation's inflation standard. I think it, more than any other measure of inflation, drives people's expectations and perceptions of aggregate inflation in the country. So for now, at least until that changes, it seems to me that the CPI is what we should focus on.

I would add just two quick final points. First, last fall's ¾ percentage point reduction in the funds rate was done because unsettled financial market conditions threatened to restrain aggregate demand in the future, but the negative shock did not really materialize. I am not sure that the implications of this are captured in our own model's estimation and hence in our forecast that I just summarized. If not, then our forecast may understate and underestimate the potential lagged stimulus that could still be coming in the months ahead from last fall's easing. That could hit the economy at a time when it is already in full stride. That, to me at least, represents a clear upside risk.

Second, M2 growth last year overshot the top of its target range by 4 percentage points; if I am correct, that is the biggest overshoot by a substantial margin since the late 1970s or maybe 1980. I recognize that some of this problem is due to anomalous factors affecting money demand. But keep in mind that our money targeting procedure--and here is a blast from the past--still allows base drift. So last year's overshoot will now be ratified by the targeting procedure. That big potential monetary impulse will still be out there as we move through 1999, even if we are able to keep M2 growth within whatever target range we set for 1999. So, bottom line, I think the balance of risks in the outlook has now shifted back to the upside.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. I could just say that the District economy is doing well and that the risks to the national economy are balanced, but I will bow to Committee tradition and elaborate some.

The regional economy in the Philadelphia District remains strong and, if anything, has picked up a little strength recently. Manufacturing has accelerated in recent weeks, following several months of deterioration. Retail sales have held up, with notable strength in autos. Home building has been on the rise. Commercial construction is doing well without the emergence of the kind of boom/bust signs that have characterized the industry in past expansions. Labor markets remain tight. There are layoffs among some of the larger firms, but smaller firms are hungry for employees. Large signing bonuses for some job specialties such as programmers are common, but general wage pressures are not showing through in the form of higher prices.

Looking ahead, most business people feel confident about the outlook for 1999, but on the whole they expect a less robust year than in 1998. The risks to the national outlook are still broadly balanced with perhaps a shade more upside than downside risk because of the momentum from domestic demand coming into the new year. Nonetheless, the downside risks are there, mostly in the form of potential turmoil emanating from international developments. With inflation low and not likely to accelerate quickly, we have the luxury of watching and waiting.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Thank you, Mr. Chairman. The Sixth District has begun 1999 on a moderate growth path, consistent with a healthy and balanced expansion. Residential building has moderated, at least for the moment, but that should be offset by a healthy commercial real estate sector. Factory activity was sluggish again in December, and new orders and production are soft compared to a year ago. However, the outlook indicators from our latest survey are positive. The strength is in the high-tech area. The exceptions are apparel and paper, which continue to be weak, but that is not a new story.

As for our important tourism industry, in recent meetings I have noted some sluggishness in future bookings but the outlook is promising this time. While there was some disappointment regarding the traffic over the year-end holiday season and some continuing concern about a falloff in Latin American visitors, the Super Bowl provided a big shot in the arm. And domestic tourists with money to spend fleeing the cold weather in the North should ensure a strong first quarter. Airline flights to Florida and the Florida resorts are fully booked through February, and the cruise industry is bullish on 1999 due to strong bookings.

Low energy prices continue to pose a problem for Louisiana. The rig count declined still again in December and now stands at 147, the lowest since August 1995. The only clues about capital spending plans in the region come from our December manufacturing survey. It showed that expected capital expenditures six months out were more positive than in November. About one-third of our respondents said they expect an increase in capital outlays over the coming period.

Consistent with the national price data, price inflation in the District generally remains subdued. However, as others have said, labor markets remain tight; and we are now getting reports of growing wage pressures, with increases in the 15 to 20 percent range being necessary to retain key employees with certain specific skills. It is not clear to us whether these wage gains are being fully picked up by the ECI data because many of the increases are in areas other than regular wages, such as incentive pay, premium pay, and bonuses. The only other area where we continue to get reports of price increases is health care, as others have noted.

Brazil's problems have worsened the outlook for the District's exports to Latin America, damping earnings prospects for regional companies investing heavily in that part of the world. Although not huge in the total scheme of things in 1997, companies based in the Southeast exported $2.6 billion to Brazil, accounting for about 20 percent of the value of the nation's shipments to that country. We think Florida is the state with the largest exports to Brazil, with about two-fifths of the value of the state's shipments attributable to computer equipment, electronics, and transportation.

At the national level concerns clearly remain about the international sector. I will turn to that in just a moment. I suggested last time that I saw a danger in having our attention diverted from the stronger-than-sustainable growth and the inflationary pressures that may now be building within the domestic economy. I am no less concerned now than I was at the last meeting. Although our judgmental forecast, like that of the Greenbook and most others, sees some slowing in the pace of growth over 1999, as of yet there are few measurable signs of that slowing. Our concern that growth may once again turn out to be stronger than expected is further influenced by the projections of our Bank's econometric model. That new VAR model, which has tracked the performance of the economy quite well over recent years, is now suggesting a significant upturn in inflation during 2001 to a rate approaching the 4 percent level as measured by the CPI. Importantly, that model also suggests that a significant increase in the federal funds rate--to a level above what we may be comfortably willing to contemplate--will be required to keep inflation at even a 3 percent pace.

While I am not campaigning for a monetarist label, I would also note that the growth of the monetary aggregates shows no signs of abating and in fact continues to accelerate. The longer that continues, the greater the risks may be of an outbreak of inflation. I expressed the view last time that with the lags that we know exist, the implications of this relatively long period of strong money growth may not yet have shown through in our inflation measures.

Governor Rivlin also made some observations about lags at our last meeting, suggesting that for a number of reasons we may now have the luxury of waiting longer to institute needed policy changes because the economy has become more responsive to shocks than it was previously. That hypothesis piqued our curiosity and we attempted to investigate it a bit. We did so by examining differences in the impulse responses in our model, estimated over different periods of time. Indeed, as was hypothesized, that modeling work does suggest a faster response recently to real side shocks than was the case previously, although the quantitative response to those shocks appears to be smaller. At the same time, we found no evidence that there was any change in the economy's response to monetary policy shocks, which continue to work with long lags, requiring over two years for 80 percent of the total response to be reflected in measures of inflation. Obviously, we have a limited number of recent data points from which to do such modeling but, in addition to the other reasons I suggested for caution, the results of that work are flashing caution lights for me.

Turning very briefly to international developments: We have followed recent problems in Brazil with special care, given the ongoing bank supervision work we do in Latin America, working with central banks and other supervisory authorities. Early in the year my staff was telling me that the major key to possible developments in Brazil lay in whether authorities could engineer an orderly depreciation of the currency and whether it could be accommodated peacefully by Brazil's multilateral creditors. We did not expect that the depreciation would come so soon or that the value of the real would decline by 40 percent or more. The good news, it seems to us, is that there has not yet been much spillover effect to other countries as might have been expected. After initial declines, the Mexican and Chilean pesos have recovered somewhat. Argentine authorities have assured that peso/dollar convertibility would be maintained, and Venezuela does not appear to be under substantially more pressure than it was prior to the Brazilian problems. Moreover, trade ties with Brazil and the rest of Latin America, except for Argentina, are relatively limited.

In summary, the international situation certainly remains fragile, and we could have to contend with the shock of worsening problems in Brazil, added contagion from the Brazilian problem, or both. Having said that, I don't think we should give undue weight in our policy deliberations at this meeting to what could happen in that part of the world and too little weight to the still very strong domestic economy, given inflationary tendencies that have been identified by both the Greenbook and the independent work at some of our Reserve Banks. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. The Kansas City District continues to do well and its economy is basically sound. Our weak areas continue to be agriculture and energy, and there has been some slowdown in certain areas of our manufacturing sector. Of course, there is some concern on the manufacturing side about the Brazilian situation, particularly if that were to spread to Mexico, on which we are much more dependent. Having said that, the economy otherwise is doing very well even in some of the manufacturing sectors as well as in the housing sector and construction generally. Retail sales continued strong, even in January. Overall, our major cities are still booming.

On the national front, I expect the economy's growth to moderate toward trend this year with low inflation, as others have said. In other words, basically we see the economy continuing to grow. The issue we face continues to be very strong domestic demand set against the backdrop of weak international demand, which is further complicated by the possibility of adverse shocks. That has not changed much in the last several months. Nevertheless, compared to last fall I believe that the risks to the outlook are now far more balanced because of the earlier rate reductions taken to offset the global financial turmoil. As a result, as others here have indicated, I am becoming more focused on the potential upside risk to inflation if we continue to maintain our current monetary stance. To me, a key issue for this Committee at this meeting or very soon is whether, when, and how fast the policy actions of last fall should be unwound. Thank you.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. The economy of the Ninth District remains strong outside of some parts of agriculture and mining. But aside from that, consumer spending is continuing to expand, construction is very strong, and labor markets remain very tight. The Twin Cities economy without question is booming, and that is a term I do not use often. As just one indication of that, the unemployment rate in the Twin Cities metropolitan area is now about 1½ percent, which obviously means that everybody who wants a job has one or probably several. So that area is going along very well. There are wage pressures but selective ones. They tend to be for some entry-level positions, for some information technology professionals, and so forth, but they by no means seem to be generalized. When we ask business people whether they are seeing inflation or deflation, the answer we get back most frequently is "neither."

The one thing that gives me real pause about the District economy--and it is a little disconcerting--is that bankers still seem to be chasing deals very aggressively. That is my general sense from conversations with them and with some of their customers.

As far as the national economy is concerned, let me say first that I was impressed with both the number and the variety of the scenarios presented in the Greenbook, the Bluebook, and in this afternoon's presentation. I believe they help us think about the risks and about how we ultimately might want to be positioning monetary policy. But an equally intriguing question is the reasonableness, or the accuracy, of the baseline forecast. In that regard, I would say that I am a bit more optimistic about real growth in 1999. That is as a consequence of both the momentum behind aggregate demand as we go into the year and also because I am more positive about productivity trends and, therefore, the supply side. So, I think we might see somewhat greater real growth than in the Greenbook. Another reason for being positive about the real outlook is that our VAR forecasting model is quite positive. It has been reasonably accurate in 1996, 1997, and 1998, so it is harder to dismiss the model forecast than it used to be since it is building up a bit of a track record.

I agree with the Greenbook's view of a modest uptick in inflation mainly because I think there will be some unwinding of the effects of the favorable shocks that we have experienced in recent years. But I must say the anecdotes about essentially no inflation give me some pause as I think about that.

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. I am glad I stimulated research in Atlanta. I am interested in seeing it.

A couple of meetings ago I referred to the cheerful little elves who run the U.S. economy and get their kicks out of proving the cautious forecasters wrong. The only thing that can be said about the economic news since our last meeting is that the elves have scored again. When I heard that the estimate of the 1998 fourth-quarter GDP was likely to be about 5 percent, I said, "Wow!" Then the official estimate turned out to be 5.6 percent with the possibility of an upward revision to perhaps over 6 percent.

The elves clearly have been working overtime and they have gotten more ingenious. They have figured out how to control the weather, at least temporarily, and how to keep productivity growth increasing when any reasonable elf would suspect that all the reengineering and restructuring and computerizing that could be done had been done already. Most amazing of all, they seem to have figured out how to keep unemployment rates lower than what the NAIRU enthusiasts have said for a long time is the drop-dead rate, while wage increases actually have decelerated and inflation does not seem to be a danger at present.

The elves are clearly beginning to undermine the confidence of their opponents, the Greenbook forecasters, [laughter] who are starting to doubt their own models, or at least are getting a little defensive about them, and perhaps even doubt their common sense. To be sure, the Greenbookers are too sophisticated to fall for the elves' more brazen gimmicks like the weather ploy, or the bounceback from the auto strike, or perhaps even the extraordinarily low oil price. They think those cannot be sustained, so they are boldly forecasting a relatively quick slowdown to trend and some acceleration in prices.

But after pointing out for some time that stocks were overvalued and that the stock market likely would come down, the Greenbookers are now saying that those stocks are even more overvalued than the last time they looked. And although they expect profits to decline further, they do not expect stock prices to fall. They will only move sideways. What can be the explanation of that? It's only the fear that the elves have been right so often that the Greenbookers would be embarrassed to be caught wrong again. Besides, nobody can predict the stock market.

The question now is: Have the elves run out of tricks or can they beat the game one more time? If it were not for the rest of the world, I would bet on the elves. However, I am not sure they speak Portuguese. I am not sure they can move the Brazilian political system into higher gear fast enough to reassure a nervous world market. I am not sure the elves, for all their ingenuity, can control the mood swings of international investors or control the contagion that might flow from a collapse in Brazil or from some other major negative event as yet unpredicted.

So despite history, I am left thinking that the Greenbook may actually win this time, though I must admit that I also thought that about the Atlanta Falcons. [Laughter] There is some risk that the economy may prove stronger in the early part of the year than the Greenbook forecast. I also have my doubts about whether the increase in the oil price will be as much as they think. On the other hand, the Greenbookers may have overreacted to the elves on the stock market and could be understating the chances of a negative wealth effect. On the domestic front, I see the risks of upside and downside surprises around the Greenbook forecast as approximately balanced. However, internationally, I see the risk as principally on the downside and possibly quite serious.

As for the FOMC, I believe we should watch the game very carefully from our comfortable seats on the sidelines but resist getting into the action. Right now, any action, or even any indication of possible action, is likely to do more harm than good.

CHAIRMAN GREENSPAN. I kept hearing green eye shade when I know that is not what you said! President McTeer.

MR. MCTEER. Do I have to? [Laughter]

CHAIRMAN GREENSPAN. No!

MR. MCTEER. I will be very brief. I think Alice ought to write a poem entitled "The Elves versus the Greenbookers."

SPEAKER(?). It doesn't rhyme.

MR. MCTEER. Little has changed in the Eleventh District since our last meeting, so I will be very brief. As I said then, the growth rate in the Eleventh District economy slowed throughout 1998, and that has continued in recent weeks. With oil prices hovering in the $12 range and not expected to pick up appreciably in the near future, consolidations and layoffs in the energy sector will likely continue for quite some time. Mexico, which accounts for nearly 40 percent of Texas exports to foreign countries, continues to weaken due to lower oil prices and the higher interest rates they experienced in the weeks following Brazil's currency devaluation. This does not bode well for the Texas economy in the months ahead.

On the other hand, our contacts in the semiconductor industry, which also has been a source of weakness recently, indicate that there are signs that demand has bottomed out and that shipments have begun to improve. We recently learned that some of the workers who have been laid off in the semiconductor and communications sectors have been rehired as contract workers. Other segments of the economy that continue to show strength are all the areas of construction.

Labor markets remain exceptionally tight, and the only group that we hear has pricing power is computer programmers; everyone else says they have none. Office rents, which were rising very steeply in the first half of last year, have been increasing much more slowly as new supplies have come on the market. Other than in these two areas, there is little or no talk of inflationary pressures in our District.

Regarding the national economy, I am looking for 1999 to be pretty much a repeat of 1998. I expect the expansion to slow only slightly, due primarily to labor force constraints, but for inflation to maintain its downward tilt. Our contacts in the oil industry are considerably more pessimistic than the Greenbook staff regarding oil prices over the next year or two. I guess outside of Texas that pessimism would translate as optimism!

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Mr. Chairman, in the Eighth District the story is primarily an echo of recent months. The Eighth District was not much affected by the credit market disturbances last fall and, therefore, we have not been much affected by the weakening of those disturbances. Rather than repeat the echo of what we have seen, I would just like to make one comment: It seems to me that more and more firms are learning to live successfully with what they had regarded as labor shortages. They still do not see the pricing power needed to raise prices and, therefore, they are learning to get along with what they previously regarded as a short-staff situation. We just do not hear so much about that any more, although when we ask people they tell us about all their unfilled positions.

On the national level, my contacts at UPS and FedEx say that they see steady growth in the United States. They see the situation in Europe as solid. They see a bottoming process in Asia and they see Latin America as weak, though they do not have extensive business there.

I would comment with regard to Brazil that the market response to the Brazilian upset has seemed to me very sensible and measured. The markets have made distinctions that make good sense; that is completely unlike the response in August to the problems faced in Russia. I think the situation is entirely different.

The staff forecast makes good sense to me. We could all quibble with a tenth or two here or there. I think the staff has done a fine job of incorporating everything that is reasonably forecastable. What is going to get up and bite us at some point is something that we cannot foresee, but I am not going to criticize the staff for not forecasting the unforecastable. That's all I am going to say at this point.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Thank you, Mr. Chairman. The forecast revisions in the Greenbook are very similar to my own and in my view constitute somewhat of a sea change in the economic outlook. It doesn't seem to me that most of you share that view, so let me explain why I think that is so. Previously the Greenbook, the consensus forecast, and my own forecast projected what I refer to as a reverse soft landing. Growth slowed to below trend and the unemployment rate gradually increased, unwinding some of the exceptional tightness currently prevailing in labor markets and reducing the inflation risk posed by the above-trend growth and the very tight labor markets. The revised forecast has the economy slowing, but now just toward trend. And the result is that the unemployment rate stabilizes at a lower level than for any quarter in the previous Greenbook forecast.

My first question is: Should such a sea change in the outlook have a counterpart in monetary policy? When I talk about policy here, I really am not referring to the targeted funds rate for the intermeeting period that we will talk about tomorrow. I am talking about policy in terms of the path of the funds rate that we think would be consistent with our outlook over the next year or two and whether or not that should change in light of the changed forecast.

Let me just say a word about the inflation forecast. It does not seem to have changed dramatically, but it has changed a bit. First of all, we have mainly what I call a convergence story in 1999. That is, although core CPI does not really change, we have an increase in both the overall inflation rate and in GDP chain inflation as these measures converge toward more normal relationships to the core rate, with overall inflation rising because of the dissipation of the favorable supply shocks, particularly in the energy area. But thereafter, with labor markets very tight, the Greenbook and my own forecast would expect continued increases in inflation going forward. I think that is what we have to worry about.

I pay a lot of attention to the policy prescriptions from the Taylor rule. Sometimes the different rules that are in the standard packet yield quite different implications for policy. Today, while they offer a variety of prescriptions for the current rate setting, there is one commonality. Whether one looks at the CPI or the chain GDP price version, at the versions with imposed or estimated coefficients or with the backward- or forward-looking specification, the prescription for the federal funds rate in the current quarter is higher than the prevailing target. For example, it ranges from 5.1 to 6.3 percent for the rules with imposed coefficients.

So, I ask myself: How have we ended up departing so aggressively from the Taylor rule prescriptions? First, we hesitated to tighten in the face of global instability following the crisis in Korea and then again following the turbulence after the devaluation and default by Russia. But neither of those events to date has slowed the expansion. Second, our forecast generally called for a slowing to trend growth just around the corner, so we waited for the spontaneous slowdown rather than imposing a policy-induced slowdown. Of course, while we waited for the slowdown, continued above-trend growth kept pushing the unemployment rate lower until we ended up at a 4¼ percent unemployment rate. And now we find ourselves at that rate with one of the highest Greenbook growth forecasts in some time and many other forecasts also are pointing to relatively robust growth. Another reason we have ended up there certainly is the possibility of a structural change suggested by the combination of declining inflation along with a declining unemployment rate. That provided a good reason for not slavishly following any historical regularity.

Let me end with a suggestion on how we might want to think about the strategy of monetary policy going forward. We ought to follow and think about what I refer to as an incremental asymmetric Taylor rule. To start off, I would consider setting the initial specification of that Taylor rule by calculating what NAIRU would have to be to make the current setting of the funds rate the Taylor rule prescription. The answer is that in the Taylor Rule with imposed coefficients, the NAIRU would have to be about 4½ percent. I think that is very much on the low side, but some might find it a plausible number. That is fine. It seems to me that going forward we should at the very least follow the Taylor rule incrementally, raising the funds rate if continued above-trend growth was pushing the unemployment rate even lower. That is, going forward we should be careful to begin again to lean against a cyclical wind; otherwise we will continue to accommodate and indeed reinforce any and all positive demand shocks.

On the other hand, if the unemployment rate were to rise modestly, given its already very low level, I would resist easing immediately. Hence the asymmetry in my approach. If inflation increases--and here I mean increases in the core CPI rather than a convergence of the overall rate to the core CPI--then I think we should respond as in the Taylor rule with more than proportionate increases in the nominal funds rate. On the other hand, if inflation declines modestly further, I would passively accept an increase in the real federal funds rate in light of the very low level of the prevailing unemployment rate. That again is an asymmetric response. So, I offer that as food for thought as we turn to discuss policy strategy in more detail tomorrow.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Thank you, Mr. Chairman. The Second District's economy retained strong momentum going into 1999, with price pressures largely in check. Private sector job growth in New York and New Jersey accelerated to a 3.1 percent annual rate in the fourth quarter. New York City registered its strongest annual job growth on record, 2.7 percent; the previous high had been 2.2 percent in 1969. Retailers report brisk post-holiday sales in January, buoyed by a later-than-usual cold snap, a relaxation for eight shopping days of the sales tax in New York City, and I suppose the view that since it got cold people needed winter coats after all.

Availability of office space in the New York City area was tight but stable in the fourth quarter. Vacancy rates stopped falling and rents rose at a less frenzied pace. Our District's housing market showed more signs of strength in December as indicated by rising home construction, brisk home sales, and sturdy price appreciation. A benevolently warm, delightful December might have had something to do with that. Surveys of Purchasing Managers indicate continued weakness in the region's manufacturing sector. Hotel occupancy rates in Manhattan remained exceptionally high in December, with room rates continuing to run about 10 percent ahead of a year ago. In spite of all that, the CPI in the metropolitan New York City area rose only 1.6 percent in 1998. That is the lowest since 1964, and I assume that the mayor is extraordinarily unhappy that he cannot run for reelection.

At the national level, our forecast for growth is very much like that of the Greenbook. The Greenbook suggests 2.6 percent in 1999 and we have it at 2.5 percent; we have growth at 2.3 percent in 2000 as compared with 2.4 percent in the Greenbook. We are a little more concerned about--or at least our forecast shows a higher increase in--inflation. We have the CPI at 2.8 percent in 2000 compared with the Greenbook's 2.4 percent.

The question of the balance of risks is an interesting one at the moment. If one were looking only at the domestic economy in the United States, there is no question in my mind that the balance of risks would be on the upside. That is, the economy is likely to grow faster than we anticipate. On the other hand, the risks on the international side would have a negative effect. But I think they are likely to be understandable more quickly than has been the case in the past. Japan is weak and could get weaker because of the combination of and terribly low consumer and business confidence. Continental Europe and the United Kingdom are slowing down a bit, but probably not to a point where some policy action couldn't turn those economies around.

The interesting case, obviously, is Brazil. Brazil is a country that I think is very, very different from just about every place else. It has immense natural resources and a very diversified high quality population. They are given to considerable swings of confidence and to periods of believing that the national leader is capable of great and wonderful things. For a quite understandable reason, they thought that President Cardozo would be able to continue to lead the economy and to make good his commitment to the exchange rate design, which was both the economic and perhaps more importantly the psychological base of the real plan. The law of gravity prevailed, or markets prevailed, and that was no longer possible. The leadership in the country had been so committed to what they were doing that they did not have contingency plans ready. That is not surprising; most people don't have contingency plans ready. Therefore, the Brazilians are still going through a period of trying to figure out what to do. However, just in the last couple of days, it looks as if people are beginning to find a more positive view of the situation. Now, that could reverse because as one bumps along a psychological trough it is difficult to know whether the next bounce will be down or up.

The important thing is that between now and our next meeting, the Brazilians either are going to restore their sense of confidence in their leadership and their country or they will not. If they do, the Brazilian shock probably will be less great than we now think it is likely to be. On the other hand, if they don't regain their confidence, the shock will be a bit greater and the contagion effect on Argentina and Mexico a bit more severe.

Therefore, at the present time watching and waiting clearly makes a great deal of sense for us. We do have to be careful not to fall into the trap of thinking that we are the central bank of the world because we are not. With any luck, we will have a much better opportunity at our next meeting to calculate more accurately what Brazil is likely to do. Then we will be in a position to make a more accurate judgment about what policy path we should follow and how quickly we might need to adjust our current policy.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. I felt the fourth-quarter growth statistics were significant news. They pushed the slowdown further into the future. There is still a slowdown in both the Greenbook and the Blue Chip forecast but it is smaller. The Greenbook now has only one quarter of growth below 2.5 percent. It seems to be nearly a perfect soft landing in both forecasts without requiring policy changes. The question is: Is that too good to be true?

The slowdown in the Greenbook forecast hinges on three factors. I would like to discuss each one briefly. The first is the international situation. I am beginning to change my view about that because in a way we have taken the full shock. We are now on the pessimistic outcome track for Russia, Japan, and Brazil, along with having a modest slackening in Europe. The effects are noticeable, but as we saw in the Chart Show earlier, they have done relatively little damage to U.S. demand growth. The U.S. economy may not be an oasis of prosperity, but at least it seems to be a cluster of palm trees. [Laughter]

On the stock market, even the Greenbook seems to have given up waiting for the market to drop and now projects only a sideways movement. Actually, I more or less agree with that. My own reasoning is similar to the point that Bob Parry's question brought out earlier, which is that the earnings/price ratios are not out of line with falling real interest rates over the past few years. So I think the Greenbook forecast on stock prices is roughly accurate, and that has actually changed the staff's forecast some.

The third factor is something we have not talked about much here; it is the investment accelerator. Investment is slowing down from the rapid pace of a few years ago, but it is still growing more rapidly than output in the forecast. With the prevalence of information technology investment, it's not clear to me how much of an accelerator-induced slowdown we should expect in investment any more.

In summary, my view is that each of these negative factors that could generate a slowdown is either partly digested, weakened, or in some doubt. There are still grounds for expecting some slowdown, but as far as I am concerned the balance of risks may be shifting. At the same time, I think it is too early to change policy because I also see very few signs of price acceleration yet. There is some in the Greenbook forecast, but that is partly due to special factors such as oil and partly due to an estimate of NAIRU that I am growing uneasy with, though I don't want to write down my own number. There is not much acceleration of inflation in the Blue Chip forecast. So, all things considered, it is difficult to proclaim that we see an acceleration yet.

The second factor is productivity growth, which Dave Stockton illustrated in his charts earlier. That growth may be stepping up by a fairly noticeable amount, which actually gives us more room for vibrant demand growth.

The third factor is the lags in monetary policy, the subject that Governor Rivlin put on the table at our last meeting. Unlike the Atlanta Fed, I was not able to do any research on this in the last month, so I accept what she said. I do believe that monetary policy operates more quickly these days, and I think that does give us the luxury of waiting for evidence. We still have to be alert. We have to move quickly. But we don't have to move in advance of real evidence of acceleration in inflation which, as I said, is not available yet.

All this adds up to me as an argument for sitting tight. But as a result of the continued strong growth in the U.S. economy, I do think the balance of risks is changing. Thank you.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. As we start the new year, we are clearly faced with a different situation from the one we faced last year, and we probably will have some difficult decisions to make in the not-too-distant future. Last year, our forecast of slowing obviously was being driven by external events; now we have a forecast that suggests slowing will be driven to a large extent by internal forces, namely private domestic final purchases. It is obvious that just as domestic forces proved much stronger than the drag from deteriorating net exports last year, so too the forward momentum of the economy may prove to be stronger than the forces for domestic slowing featured in the current forecast.

As the Greenbook notes, the near term will probably reflect some unwinding of special factors that led to the upside surprise in the fourth quarter, namely unusual weather and an auto strike rebound. Certainly there is some truth to that. But the major factor for the long-term slowing, as I read the Greenbook, appears to be a forecast that the bull market has run its course and that the household wealth-to-income ratio will decline. I must admit that to me, as to others, the stock market does seem to be levitating above what one might think of as reasonable levels. But it is also true that we simply do not know enough about the forces that drive the stock market to put significant weight on a forecast that has a flat stock market as a prominent feature. Therefore, it is really unclear to me that we are going to see the slowing that we all seem to have in our forecasts. The risks seem to be mainly to the upside. It is easy to determine what those risks are and what may drive economic growth above the forecast: plentiful jobs, accommodative credit conditions, and upbeat consumers.

The external sector was a major downside risk last year. This year much of that has been resolved with the obvious exception of Brazil. Brazil is still a large and troubling question mark, but the contagion thus far has been contained and market reaction has been muted. Most of the other issues that we were concerned about last year seem to have resolved themselves. They are reasonably well understood and probably have already had their strongest impact on the U.S. economy. Emerging Asia seems to have bottomed out. The most credible forecast for Japan is that while it will not strengthen in the next several years, the deterioration will be moderate from this time forward. Europe shows some slight weakening, but there are reasons to believe that monetary policy there can offset that. Therefore, despite the uncertainty created by the Brazilian situation, we have probably seen the worst of the risks from the external sector.

While citing these forces for faster growth, one must also admit that there are few signs yet of emerging inflation. The economy has achieved this benign price picture through a combination of special factors and possibly through increasing productivity growth. However, there are some risks to the inflation outlook. One is that the special factors will unwind more quickly than we currently expect. Another is that labor market tightness will worsen at a faster pace than businesses can offset. It is not only that the unemployment rate is at a generation low, we also have fewer excess reserves, if you will, in the labor market. The number of people of working age who are not in the labor force but want a job has been decreasing at a fairly steady pace and is now at its lowest level since 1970, when that statistic first began to be tracked.

Given the string of surprises we have had, including the strength of the fourth quarter, like many others here I approach a forecast of slowing with some skepticism and see the risks both internationally and perhaps even domestically as shaded slightly to the upside compared to the baseline forecast. I think the appropriate response for us is to rely less on a future as predicted by models and more on inferences, both quantitative and qualitative, that come in with the latest data. Obviously, for those of us who take this approach there are some challenges. By necessity we are likely to have a shorter time frame for action. However, the corollary is that once the evidence is more clearly in hand, we should not hesitate to move decisively if the data so warrant. We are not precluded from acting preemptively if new information were to tip the balance of risks to the outlook much more decisively toward an unacceptable probability of higher inflation. Such a probability, if it were to emerge, would in my judgment warrant a policy response. We are not there yet in my view, but we may be soon. We must be careful not to misinterpret the signals that we receive.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. Thank you. Mr. Chairman, I would not have thought it possible, but somehow the Committee's policy dilemma continues to deepen rather than to show signs of beginning to resolve itself. The economy continues to surge ahead. We all, or at least most of us, believe that it should and will slow. But we have had good reason to believe that for some time and yet the pace, if anything, has accelerated and there are few signs of slowing so far. If the pace of growth begins to slow as we expect, we likely will have to address the possible need for further easing at some point. If, however, the present pace or something close to it should continue, we soon will almost surely need to consider at what point policy will have to lean into that strength in the interest of sustainability. I say this realizing fully the difficulty that such a policy move could present internationally. But even if one adopted the most optimistic reasonable scenario of the strength and durability of the current virtuous cycle--and I am pretty much in that camp--it is still necessary to realize that it has limits beyond which unsatisfactory conditions begin to gain momentum. At the pace the economy has been growing, we are very likely getting close to those limits.

In the Humphrey-Hawkins forecast made at this time last year for 1998, we were well off the mark. Everything turned out to be much better than we expected. Growth was stronger, unemployment lower, yet inflation quiescent. The outcome was literally wonderful. Can we reasonably expect a repeat? I doubt it. At the moment, working with the available data, the risks appear to be decidedly on the upside. But I can envision the possibility, perhaps the likelihood, that this could be reversed very quickly for any of a combination of reasons arising from the domestic or international, real or financial economy.

I continue to be uncertain as to which direction our next move may be or when we should take it. But my sense is that the upside risks will have to begin to dissipate soon or they are going to need to be addressed.

CHAIRMAN GREENSPAN. Thank you. We are running a little behind schedule but not by much. We will adjourn until 9:00 a.m. tomorrow.

[Meeting recessed]

February 3, 1999 -- Morning Session

CHAIRMAN GREENSPAN. We will turn to Tom Simpson for a presentation on the Humphrey-Hawkins ranges for 1999.

MR. SIMPSON. Thank you, Mr. Chairman.

The Committee must decide whether to adopt the provisional money and debt ranges it chose last July or to modify them. In the Bluebook, we did not present alternatives to the provisional ranges because of the Committee's previous skepticism about the reliability of the relationship between these aggregates and economic performance and hence their usefulness as guides to policy. Instead, the Committee has for some time chosen ranges for money that it viewed to be benchmarks under conditions of price stability and of velocity behavior that conforms to typical historical experience. The Committee has not found that this practice has impeded its ability to extract and use information from the monetary aggregates as an input to its decisionmaking. In the case of debt, the Committee has chosen ranges based on expected growth--not the price stability benchmark--but the inconsistency between the money and debt ranges has not been a problem. Today, I would like to review the staff's projections and to discuss recent experience with money as an economic indicator.

Your first exhibit presents the provisional ranges and the staff's projections of money and debt growth for 1999 consistent with the Greenbook economic forecast. [3]/ Also shown are actual outcomes in 1998. The staff foresees growth in both M2 and M3 slowing this year, but remaining rapid with respect to their provisional price stability ranges and with respect to growth in nominal GDP. Debt of domestic nonfinancial sectors also is projected to decelerate this year but to finish the year around the 5 percent midpoint of its provisional range.

We believe that the behavior of money market mutual funds is an important element in understanding recent and projected declines in monetary velocity. As shown in the lower panel of the exhibit, money funds in both M2 and M3 have grown at double-digit rates in recent years, and both types of funds registered a pronounced acceleration last year. Of course, if growth in these components came solely at the expense of the other components in M2 and M3, their strength would not have implications for overall growth in money. However, we are of the view

[3]/ A copy of the material used by Mr. Simpson is appended to the transcript. (Appendix 3)

that much of the expansion in money funds in recent years reflects other influences that have had the effect of boosting growth in M2 and M3.

At the M2 level, we think that money funds may have been benefiting from efforts by households to diversify portfolios swollen by the surge in equity values. Illustrative of this process is the top panel of your next exhibit showing shares of mutual fund assets. Even with the hefty double-digit increases in money funds, the money fund share of total mutual fund assets had been drifting down until the middle of last year. It turned up in the third quarter amid the market turmoil and heightened demand for liquid and less risky assets and then turned back down in the fourth quarter. Looking ahead, in an environment of essentially stagnant equity prices, as assumed in the staff forecast, growth of total assets will diminish. But investors are expected to view money fund returns as more attractive in relative terms than they have in the recent past and to seek to rebuild somewhat the money fund portfolio share. In short, we foresee money funds continuing to grow fairly rapidly, lifting M2 growth again this year.

As a consequence, M2 velocity should decline further this year even though stable short-term interest rates imply little change in opportunity costs, as shown in the bottom panel of the chart. The 2 percent expected drop in velocity and the staff's forecast of 4 percent growth in nominal GDP imply the 6 percent forecast for M2 in 1999.

Turning to M3 and Exhibit 3, money market mutual funds are believed to have contributed to growth in this aggregate beyond their impact on M2. In particular, those funds in M3 only, so-called institution-only funds, have become an ever-popular cash management instrument, substituting on business balance sheets for direct holdings of money market assets outside M3, such as Treasury bills, as well as other balances in M3. Firms can outsource this function to money funds and thereby dispense with in-house time and effort required for the frequent placing of liquid balances in the market. We believe that this trend will continue for the foreseeable future, boosting M3; however, with no further declines in money market interest rates, and thus no appreciable spreads favoring money funds reemerging, money funds in M3 only should decelerate from last year.

Another factor that boosted M3 growth last year was a surge in bank credit and associated funding needs, shown in the bar chart in the middle of Exhibit 3. This was caused in part by the disruptions to financial markets beginning late in the summer that led some businesses to tap bank lines instead of market sources and banks to hold rather than securitize loans and to acquire securities having unusually large spreads. In the less turbulent market setting anticipated for the current year, we are forecasting that growth in bank credit will slow some, contributing to a slowing in growth in overall depository credit, the bottom panel. As a result, growth in depository credit should move closer to that of total debt of domestic nonfinancial sectors. With the distribution of funding between M3 and other sources similar to last year, we are led to a still considerable 8 percent expansion in M3 this year, implying more than a 3½ percent drop in its velocity, which is smaller than in 1998.

The anticipated slowing of debt growth this year shown in the chart--to 5¼ percent--is accounted for both by a larger run-off of federal debt, owing to a $100 billion projected fiscal surplus, and to some moderation in business and household borrowing. Nonetheless, growth in total debt again exceeds that of nominal GDP by about the same margin as in 1998, as spending remains tilted toward credit-intensive consumer and producer durable goods and housing and as debt-financed merger activity stays brisk.

Last year, both money and income growth exceeded staff expectations, resurfacing the question of whether the monetary aggregates may have become more reliable as indicators of economic performance. As I noted earlier, some of the unusually strong growth in M2 and M3 last year reflected not only income growth but also outsized declines in their velocities, much of which had not been anticipated. Still, the surprises in money and income were large and correlated, however loosely. Certainly, the rapid money growth in the fall was suggesting that the banking system was able to intermediate credit without serious strains.

To examine the question of whether the monetary and debt aggregates may have become more useful as indicators, I have presented some evidence on Exhibit 4--evidence that should be regarded as illustrative and not definitive of indicator properties. Each panel contains the coefficients and t-statistics for sixteen-quarter rolling regressions that relate growth in nominal GDP on a quarterly basis to growth in money or debt on a contemporaneous and one-quarter-lagged basis. Large, and positive, values for the coefficients and t-statistics imply value of the aggregate as an indicator of quarterly growth in nominal GDP growth. As shown in the top panel for M2, the last time the t-statistics approached the important level of 2 was in the mid-1980s. In recent years, coefficients have been very small and statistically insignificant at standard levels, suggesting by this metric that M2 has had little value as an indicator of nominal GDP.

Moreover, the story doesn't change much for M3 and debt, shown in the middle and bottom panels, respectively. It is worth noting that these are quite simple statistical exercises and there may be times when surprises in the monetary aggregates, allowing for special factors that may be affecting velocity, are giving off clearer signals that the economy is departing from expectations, especially when those surprises are corroborated by other indicators. Thus, at this point we are hard pressed to suggest that you treat the broad monetary or debt aggregates any differently as indicators than you have in recent years.

CHAIRMAN GREENSPAN. Questions for Tom?

MR. GRAMLICH. In Exhibit 4, what does a negative t-statistic mean? Does that mean that there's a negative sign?

MR. SIMPSON. The coefficient has turned negative.

CHAIRMAN GREENSPAN. Tom, is there any evidence to suggest that the big surge in velocity that occurred, contrary to expectations, from opportunity costs in the early 1990s may be in the process of reversing itself?

MR. SIMPSON. That's a possibility, but it is rather hard to come up with the economic intuition as to why that might be happening.

CHAIRMAN GREENSPAN. Any more so than was the case with respect to the economic intuition in 1990? What happened subsequent to 1990 was far more of a surprise than a reversal would be today, if I may put it that way.

MR. KOHN. I think that by 1991 we were beginning to get some sense of what was going on--specifically, that banks were getting into the mutual fund business. Mutual funds in particular were much more freely available to households, and households were diversifying their portfolios out of deposits. That was encouraged at the time by a steeply upward sloping yield curve which, to be sure, is reversing. So there were a lot of purchases--

CHAIRMAN GREENSPAN. We knew about that but we didn't forecast a change in the gap between opportunity costs and M2 velocity as a consequence, as I recall.

MR. KOHN. If you look back at our forecasting in 1990 and 1991, that development caught us somewhat by surprise. But toward the end of 1991 and in 1992 we were doing a better job of forecasting.

CHAIRMAN GREENSPAN. You were putting in add factors.

MR. KOHN. Yes, because we knew that the world had changed, so the old equations weren't working. Exactly.

CHAIRMAN GREENSPAN. I must say that I have not changed my view that inflation is fundamentally a monetary phenomenon. But I am becoming far more skeptical that we can define a proxy that actually captures what money is, either in terms of transaction balances or those elements in the economic decisionmaking process which represent money. We are struggling here. I think we have to be careful not to assume by definition that M1, M2, or M3 or anything is money. They are all proxies for the underlying conceptual variable that we all employ in our generic evaluation of the impact of money on the economy. Now, what this suggests to me is that money is hiding itself very well.

Don, do you think we ought to discuss the Humphrey-Hawkins issue before we go into this or after?

MR. KOHN. It's up to you. You need to do two things here. One is to decide whether to readopt the ranges you had on a provisional basis. If people have views on that, maybe while they are giving those views they can also comment on--

CHAIRMAN GREENSPAN. Let me suggest the following: If we are all of the same view as we were the last time--to stay essentially with the noninflationary or price stability ranges for M2 and M3--maybe we can get that out of the way and then discuss what to do with debt. If it turns out after we go around the table that we have significant differences of view, it may be desirable to discuss both issues together. That way we can have a single conversation covering not only what we want to do today but what, if anything, we want to recommend to the Congress with regard to potential revisions in our reporting requirements under the Humphrey-Hawkins Act. So, I would appreciate getting a quick sense from everybody as to whether they would like to stay with the preliminary M2 and M3 targets. We will learn very quickly whether or not to go on to the next discussion. The simplest way to do that is to start with you, Governor Rivlin.

MS. RIVLIN. I would stay with the preliminary ranges because I don't feel that I have any basis for a new set of targets. [Secretary's note: In the subsequent go-around, all Board members and Reserve Bank Presidents indicated that they concurred with Ms. Rivlin's statement.]

CHAIRMAN GREENSPAN. On the debt range, we have a little inconsistency. What would be your recommendation on what to use for debt?

MR. KOHN. I think you've done very well with what you have been doing. No one has really noticed this inconsistency. [Laughter] Seven months ago I gave up on this!

CHAIRMAN GREENSPAN. What specifically are we using for debt?

MR. KOHN. The preliminary range was 3 to 7 percent, and the projection is that growth in debt will be right in the middle of that range.

CHAIRMAN GREENSPAN. Does anybody disagree with adding the debt range to the vote on the M2 and M3 ranges? Hearing no objections, I suggest we vote on the three of them.

MR. BERNARD. Do you want me to read the directive language?

CHAIRMAN GREENSPAN. Yes, please.

MR. BERNARD. The language is shown in the Bluebook on page 23 under the heading "1999 ranges": "The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. In furtherance of these objectives, the Committee at this meeting established ranges for growth of M2 and M3 of 1 to 5 percent and 2 to 6 percent respectively, measured from the fourth quarter of 1998 to the fourth quarter of 1999. The range for growth of total domestic nonfinancial debt was set at 3 to 7 percent for the year. The behavior of the monetary aggregates will continue to be evaluated in the light of progress toward price level stability, movements in their velocities, and developments in the economy and financial markets."

CHAIRMAN GREENSPAN. Call the roll.

MR. BERNARD.

Chairman Greenspan	Yes
Vice Chairman McDonough	Yes
President Boehne	Yes
Governor Ferguson	Yes
Governor Gramlich	Yes
Governor Kelley	Yes
President McTeer	Yes
Governor Meyer	Yes
President Moskow	Yes
Governor Rivlin	Yes
President Stern	Yes

CHAIRMAN GREENSPAN. Let me take a minute to explain this issue of the Humphrey-Hawkins reauthorization. Unbeknownst to 104 percent of the world, [laughter] a piece of legislation went through the Congress a few years ago which effectively sunset virtually every report required to be issued by various governmental agencies. One reason it happened that way was because the legislation said that all reports listed in some obscure source would be "included under this Act," and that list included absolutely everything. Nobody here caught it except Don Winn, who does that sort of thing for a living. It came as a great puzzlement to everybody. So it turns out that under law the reporting requirements in the Humphrey-Hawkins Act--not the Act itself but the reporting aspect of it, I gather, Don--will expire at year-end.

MR. WINN. It is the reporting requirement that expires, not the goals of the Federal Reserve Act. This doesn't have anything to do with the goals of maximum employment, price stability--

CHAIRMAN GREENSPAN. I understand. Do you know offhand if our testimony is included in the reporting requirements? How is that stipulated?

MR. WINN. The way the Federal Reserve Act reads, we are supposed to submit this report on a semi-annual basis and then we are to consult with the Congress on the report. The "consulting with the Congress" has meant the testimony. If there is no report, it is hard to see how there is any obligation to testify on anything.

CHAIRMAN GREENSPAN. So, effectively, one can read the sunsetting as applying to both the report and the testimony?

MR. WINN. That is my understanding.

CHAIRMAN GREENSPAN. Clearly, when that information rolled its way onto somebody's agenda, it created a few sparks. The general presumption was that there would be some automatic rollover or reauthorization of the Humphrey-Hawkins reporting requirements and that would be that. Someone asked the newly ensconced Chairman of the Senate Banking Committee, Phil Gramm, whether in fact that would be the case and when he was going to put reauthorization on the Committee's agenda. He said that it wasn't clear to him that such legislation was needed, and that response opened up a host of repercussions. Within hours, Chairman Leach of the House Banking Committee indicated that he was adamantly opposed to any change. We are now in the position where, as best I can judge, Phil Gramm isn't saying he is going to fight this to the death but just that he thinks we ought to discuss it. It is clear, however, that it's an issue about which he doesn't feel all that strongly.

But there is a secondary issue here, which is not irrelevant to the consideration of this reauthorization. And that is that we do have an opportunity, if we so choose, to offer recommendations on changes in the nature of what we report and how we report it. So, rather than just having an extension of the existing legislation with no alteration, it is quite conceivable that recommendations from the Federal Open Market Committee would have some influence on the Congress in terms of how the reauthorization would go forward.

Since this is not anything urgent, there is no need to come to any conclusions today. But if you have some suggestions that you would like to raise today, that would be useful. And if you have a suggestion at a later time, communicate with Don Kohn. In the process, when the time for the actual reauthorization rolls around and we are requested to give our views--indeed, it is conceivable that I will be asked at the Humphrey-Hawkins hearings on February 23--

MS. RIVLIN. I think it is inconceivable that you will not be asked.

CHAIRMAN GREENSPAN. I guess that's right. So, it would be helpful to hear from you on any change that you think might be useful. Obviously, the sooner you bring it up, the better, but it need not be today. Having said that, if anyone has any thoughts at the moment triggered by the memo that was sent to you earlier, it might be useful to get them on the table so that we can get a sense of the Committee's tentative views on this. President Boehne.

MR. BOEHNE. I'd just like to comment on the broad issue rather than make specific suggestions for change. One of the criticisms traditionally leveled at the central bank is that we are a peculiar institution in a democracy in that we are not accountable and somehow are out there on our own. While the Humphrey-Hawkins reporting has not eliminated that criticism, it does seem to me that it goes a long way toward saying that indeed we are accountable. It gives us an opportunity to explain what we are doing and to consult with the Congress. So, I think Humphrey-Hawkins has turned out to be very useful, not only for us as a central bank but also because it probably has enhanced understanding to some extent on Capitol Hill.

In terms of the broad issue, I think we ought to come down foursquare in support of a continuation of the basic nature of the Humphrey-Hawkins report and the testimony. That said, there probably are some modifications that might be put on the table that could improve it or bring it more into line with some of the things we actually do. I'd like to give some further thought to what those modifications might be specifically. But on the broad question of its reauthorization, I think we ought to be for continuing it.

CHAIRMAN GREENSPAN. Yes, I think the few people I have talked to on this subject would fully agree with you on that. If anything, we ought to over-emphasize that particular point because that is the crucial part of the Humphrey-Hawkins Act, even if there are elements within it, which I suspect there are, that are just fillers and do not represent any useful communication from the Federal Open Market Committee to the Congress. Those elements really ought to be eliminated; they are a waste of time for a lot of people here in Washington and throughout the Federal Reserve. President Minehan.

MS. MINEHAN. I am totally in agreement with what Ed Boehne has said. I think there is a real downside risk if we do not report on a frequent basis to the Congress. We do have our autonomy to be concerned about. If we are not accountable, that can be taken away. We have to demonstrate that we think about the right things and that our actions are well motivated. And the Humphrey-Hawkins report is one way of doing that.

I have one question, though. I'm not all that familiar and I don't know whether my staff is all that familiar with this "filler"--to use your language--that is required by the Humphrey-Hawkins Act. That might not be all that obvious to us. Is it just the estimates on GNP, inflation, and unemployment that we prepare or are there a lot of other things the staff has to put in the report?

MR. KOHN. Brian Madigan has copies of Section 2A of the Federal Reserve Act, which covers that. Why don't you pass them out, Brian.

CHAIRMAN GREENSPAN. I think a lot of it relates to our interpretation, as distinct from what is statutorily required.

MR. KOHN. Right. Obviously, the monetary aggregates ranges are in there, but so is the requirement to take account of past and prospective developments in employment, unemployment, production, investment, real income, productivity, international trade, payments, and prices. And there is the point about discussing the relationship of all that with the goals in the President's Economic Report.

MS. MINEHAN. So we have to weigh that Report, which we get after it is given to Congress. And as far as the staff is concerned, almost all of that is required as opposed to things we have added?

MR. KOHN. To a considerable extent we feel they are required. The Act has been amended over the years to include additional emphasis on international developments. In response to that, we have beefed up the international sections.

MS. MINEHAN. Obviously, our treatment of a lot of things included in that list probably could be modified in some way or another.

CHAIRMAN GREENSPAN. That is the type of recommendation that would be helpful for me to get.

MS. MINEHAN. I figured that might be what you had in mind.

CHAIRMAN GREENSPAN. I have my own ideas, but it would be very helpful to me to get a good sense of the Committee's thoughts, as distinct from my own, on any specific issue. I might be unaware of strong support for including certain things that I thought people might not want to include. So I would like to get a sense of the Committee's views.

MS. MINEHAN. I can't comment on all the details, but there is one thing I'm sure we ought to do. We ought to convey the view that while there may be real information in the monetary aggregates conceptually, we believe the specific ranges suggest a precision about our knowledge of the relationship of those ranges to economic performance in the upcoming years that is somewhat lacking. We have told Congress that. I think some of the detailed information we are required to produce on that may not be serving us well and may not be conveying anything about what we really think is going on.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. I don't have a lot of detailed suggestions, Mr. Chairman. More generally, a key point to me about the Humphrey-Hawkins reports, which we do twice a year, is that they are very useful both internally and externally from the standpoint of developing a strategy. Naturally, at our FOMC meetings we are focused on current developments and the immediate policy issues; this semi-annual reporting requirement gives us a chance to stand back and think a bit more strategically. I think that helps us internally and it helps us in terms of communicating to the public by giving them a background against which to interpret our short-term actions and statements. I think that is a key value of this reporting requirement.

In terms of the changes, I agree with what has been said about the ranges for the monetary aggregates. It seems to me that, in terms of communicating our strategy, we need to supplement those numbers with something. As I have said in these meetings a number of times before, my own feeling is that something like inflation targets would be a particularly promising direction in which to move. We now have some experience with other central banks doing this. I would hope, now that the issue of the report is going to come up in any event, that one of the things we might consider seriously is adopting an inflation target of some sort.

I would suggest one other change. One of the key parts in the report is the summary of the individual projections we provide, which are encapsulated in the central tendency projections in the report. To clarify those, it would be helpful if we all made them contingent on a uniform assumption of no change in policy. That would in a sense put us all on the same page and eliminate any ambiguity or confusion or lack of clarity that might result from the fact that different members of the Committee may be using different policy assumptions in generating their own individual forecasts. It seems to me one of the advantages of that would be that it would help to signal the undesirable consequences of not taking policy actions in one direction or the other that we need to take. It might put us in a position to be more proactive in presenting our policy stance and perhaps less defensive in public discussions of monetary policy. I believe that is the procedure the Bank of England uses in its current reporting approach. That is another suggestion I think we ought to look at.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. I agree with much of what has been said. Just to add to a point that Cathy Minehan was making: This does seem to present us, as a Committee, with an opportunity to discuss in the testimony what we think the role of the aggregates should be. We have spent a great deal of time over the years talking about this issue, and we end up giving the targets more prominence than most of us think is warranted. This may be an opportunity to adopt a procedure that would more closely reflect what we in fact do and what we believe in terms of the weight these statistics versus others should be given.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, it seems to me that everybody here is in agreement that the Humphrey-Hawkins testimony is a great opportunity and should be continued. I have a little difficulty, just procedurally, hearing people say they like this, that, or the other thing because that results in a disorderly debate. People make suggestions, some of which I think are grand and some of which I think are quite bad. If people gave their ideas to Don Kohn, as you suggested, then at the next meeting we could have an orderly discussion of the ideas that have been offered rather than have somebody announce an idea and others by their silence give the impression that they agree with it. In some cases I agree and in some cases I don't. But we could spend the rest of the week here if we debated every idea brought forward.

CHAIRMAN GREENSPAN. The difficulty is that the February 23 testimony is before our next meeting. One possibility is for Don Kohn to send around a questionnaire and list the various suggestions that would involve changes to the statute. Changes on things not mandated by statute we can make any time we want.

VICE CHAIRMAN MCDONOUGH. I was of the impression that at the testimony on February 23 you would be asked what you thought and you would give a generic answer that the testimony is appropriate and that we will be thinking of suggestions on the content of the reauthorizing legislation.

CHAIRMAN GREENSPAN. Yes, I could do that. In fact, that is what I would plan to do. What do you think, Don?

MR. KOHN. I think this could be a two-stage process. That is, you could make it very clear on February 23 that the FOMC strongly supports the continuation of a reporting regime of some sort embedded in law. And you could say that we would be more than happy to work with the Congress over time on designing a reporting regime that meets their needs and that we think is reasonable. So, I don't know that we need to reach a conclusion before February 23 about what we want in the legislation except that we want the regime to continue and that we will be more than happy to work with Congress on how that process will go.

CHAIRMAN GREENSPAN. That strikes me as a quite reasonable approach.

MS. MINEHAN. Yes.

CHAIRMAN GREENSPAN. Why don't we leave it there, then?

MS. RIVLIN. May I raise a technical point as a word of caution? If we start to indicate what we would like future Humphrey-Hawkins reports to include, in terms of what we would want specified in the law, we will not get the last word. They will. Every member of the Banking Committee is going to have an idea about what ought to be in the law, and the easiest thing for the Chairman of that committee to do is to put them all in. I think we should not encourage a rewriting of the law, even though I personally would like to get rid of the monetary ranges, because once we start down that road we might end up a lot worse off than we are now.

CHAIRMAN GREENSPAN. That is indeed a thoughtful comment.

MR. BOEHNE. That's a good point.

CHAIRMAN GREENSPAN. The more I think about it, the more it strikes me as being subtly obvious.

MR. BOEHNE. Yes, I agree.

CHAIRMAN GREENSPAN. We may actually be better off with the same legislation.

MR. STERN. We can make some changes without changing the Act.

CHAIRMAN GREENSPAN. We can make a lot of changes ourselves because the statute itself is not all the explicit.

MR. BOEHNE. I think Alice has spoken wisely; I think she's right.

CHAIRMAN GREENSPAN. You earned your pay today! President Moskow.

MR. MOSKOW. I think Alice's caution is very well stated. In looking at this though--and this is really the first time I have looked at it carefully--I assume this is the entire reporting requirement.

CHAIRMAN GREENSPAN. That is the Act.

MR. MOSKOW. The section is entitled "Monetary and Credit Aggregates." All the reporting is under monetary and credit aggregates, which is rather ironic given the discussion we just had about the limitations of the aggregates themselves. I recognize that there is some risk in trying to come up with changes to this, but it really is misleading to the American people to have the reporting requirements in a section entitled "Monetary and Credit Aggregates." I would hope that we could do something better than that in terms of how we are going to communicate.

MS. RIVLIN. If none of us has read it, you can rest assured very few other people have. [Laughter]

MR. KOHN. I'm not sure whether that title is something we put on the document or--

MR. MADIGAN. Yes, Virgil Mattingly says it is.

MR. KOHN. It is our title, not what is in the law. So the next time we reprint the Federal Reserve Act, we can change the title.

CHAIRMAN GREENSPAN. Can we legally do that?

MR. MATTINGLY. Yes.

MR. PRELL. It is just an editorial--

CHAIRMAN GREENSPAN. That is not in the literal Act itself? I am learning things that I did not know.

SPEAKER(?). Let's do it tomorrow. Why wait?

CHAIRMAN GREENSPAN. I am learning all these things, though I'm not sure of what conceivable value they are. [Laughter] Why don't we leave this issue for now. I think Alice has raised a more fundamental question. Let's think about it for a while and then Don Kohn can poll us before the hearing to get a sense, at least, of how we would like to answer the question at the hearing. And then we can go on from there. Is that satisfactory to everyone? Let's do it that way. Let's move on then to Don Kohn.

MR. KOHN. Thank you, Mr. Chairman.

> I will begin my briefing today with a discussion of the simulations presented in the Bluebook, and I will be referencing the charts in the Bluebook in the process. These exercises were designed to shed light on the economic and policy environment embedded in the staff's Greenbook forecast, and they may have implications for the Committee's policy strategy.
>
> The baseline scenario, shown on Chart 3 following page 8, extends the Greenbook forecast. It was designed to be consistent with the

underlying logic and economic trends of that forecast, and hence preview what could be in store after 2000. The staff's assessment is that the economy is now in disequilibrium in that the unemployment rate is below its sustainable level; moreover conditions are not in place to correct this situation. Real interest rates are lower than their natural levels and fall further over the next two years as the nominal interest rate is held constant while inflation and, by assumption, inflation expectations rise. Decreasing real rates do not produce an even greater intensification of inflation pressures because some of the economic strength of 1998 is seen as transitory and because the equilibrium real rate is falling. Over the long run, the wealth-to-income ratio declines as the stock market levels out, government debt is paid down, and foreign indebtedness grows, raising household saving and depressing the natural interest rate.

This disequilibrium implies that policy must firm at some point and that the economy must experience subpar economic growth to limit inflation. In the baseline, the policy response was assumed to be delayed and the Committee satisfied with capping inflation at 2¾ percent. To hold inflation down by more, as in the price stability scenario, the Committee must begin to tighten sooner and be willing to continue to firm policy even as the unemployment rate rises.

The disequilibrium in the baseline arises from a judgment that the surprisingly favorable inflation performance of recent years has been the product in part of transitory factors depressing prices and labor costs. The lower NAIRU scenario in the second set of simulations, shown on Chart 4 after page 9, considers the consequences if instead the disinflation is assumed to have been a result of lasting changes in the structure of labor and product markets. If the NAIRU is as low as 4½ percent, the economy is not in disequilibrium at present and nominal and real interest rates are close to sustainable levels. Under these conditions, keeping the federal funds rate at 4¾ percent over the next several years will be associated with a slight uptick in inflation as oil and import prices turn around, but only to a steady state rate of 2 percent.

As it happens, a 4½ percent NAIRU also would help to reconcile the current stance of monetary policy with the results of Taylor-type rules. Governor Gramlich noted at the last meeting and Governor Meyer yesterday that the versions of this rule the staff calculates all tend to show that the federal funds rate is too low. This undershoot results from the existence of a large gap of actual over potential output, by standard calculations. If the NAIRU is at the lower 4½ percent level, however, the gap about disappears, and the current funds rate is more nearly consistent with the Committee's past pattern of reactions to actual and forecasted levels of output and inflation and with Taylor's rule. Of course, it is possible to look at the results from both types of experiments from another perspective: For the current level of the funds rate not to be too accommodative over time, structural changes in labor and product markets must be very substantial and persistent.

The surprises over recent years have been in aggregate demand as well as aggregate supply, and the simulations shown on Chart 5 after page 10 look at the implications of situations in which aggregate demand deviates from the baseline. We chose alternative paths for the demand for producers' durable equipment because that has been an important source of unanticipated strength in aggregate demand in recent years and feeds back on supply as well. Greater capital spending does raise the productivity of labor and the level of potential output over time, but its more significant effect in the short run is on demand. Thus, policy must be appreciably firmer if demand surprises on the upside, even if it is productivity-enhancing spending that constitutes the surprise. The simulation follows the Taylor rule to tighter policy; perhaps the more general point is that with labor markets already stretched, policy needs to respond promptly to unexpected overshoots in demand to hold down the rise in inflation.

Against this background, the decision at this meeting would seem to rest in part on whether the Committee agrees with the basic message in the staff forecast that existing and prospective pressures on resources and the likely recovery in oil and import prices point toward higher inflation. If the Committee views the risks as strongly skewed in this direction, it might want to consider a firming of policy, if not at this meeting, then in the near future--as might be indicated by a tilt toward firming in the directive.

Growth has yet to slow from an unsustainable pace, and labor resource utilization is higher than expected when you eased in November. From a somewhat longer perspective, over the past year both the unemployment rate and the federal funds rate have been reduced significantly. Other things equal, policy interest rates and unemployment rates ought to move in opposite directions, since the lower unemployment rate generally raises inflation risks. Of course other things haven't been equal. For one thing, inflation and, to a lesser extent, inflation expectations were falling in 1998, raising real short-term rates. But a good portion of the decline in nominal short-term rates since last summer probably has fed into real rates, offsetting much of the previous increase. In addition, inflation expectations may be less likely to fall going forward to produce such a passive tightening with the nominal funds rate unchanged. Even if the staff has given too little weight to the possibility that the economy is much less "inflation prone," transitory factors surely have played some role in holding down prices. Absent additional serious problems abroad that reduce commodity prices and put upward pressure on the dollar, those factors will abate, giving underlying cost pressures more of a chance to show through to prices and price expectations over time.

Another thing that wasn't equal last year was the financial market disruptions that led to a tightening of credit conditions for a time. However, the expansion of economic activity has been supported by reasonably well functioning financial markets of late. Growth of money has been strong, and credit has been readily available in markets as well as at banks. While risk spreads remain high in some sectors of the markets, they have stabilized for the most part; despite higher spreads, the cost of credit for many borrowers has declined on balance since last summer, owing in part to Federal Reserve easings. And increases in equity prices have boosted wealth and reduced the cost of equity capital. Improved conditions in credit markets have been signaled by their resilience to year-end pressures and to the difficulties of Brazil. Indeed, to the extent your easing last November was undertaken to protect against the possibility of major financial disruptions from these particular events, that protection might seem to be less needed now.

Despite the ongoing risks of greater price pressures, however, inflation has remained very well behaved. Moreover, threats persist to U.S. economic performance from developments abroad. In these circumstances, the Committee may be inclined to leave policy unchanged today, and also to consider the odds on tightening in the near future remote enough to justify retaining a symmetrical directive.

The benign inflation news, especially when coupled with a lack of acceleration in nominal compensation, might suggest that the potential for higher inflation has not yet been demonstrated. Uncertainties about the supply side of the economy make preemptive policymaking especially difficult. Although the Committee may not want to await the "smoking gun" of a string of higher inflation numbers before it firms, it might want more indicators that current levels of pressures on resources were raising costs than it now has. And in this price environment, it may have the scope to wait for confirmation that growth remains above potential before leaning against tightening labor markets.

Moreover, our economic performance may be viewed as still subject to downside risks from developments overseas. A highly unsettled Brazilian situation has the continuing potential for financial contagion to other countries beyond that assumed in the staff forecast. And industrial economies aside from the United States appear to be weakening. In Japan and Europe, the risks to growth prospects may be tilted to the downside partly as a consequence of constraints on monetary policy from the zero bound in Japan and from the desire to gain credibility and impose discipline on fiscal policy in the Euro zone.

Financial markets looking at the information on the U.S. and foreign economies have taken out their previous expectations of ease, but they have not built in any odds of a tightening in the foreseeable future. With inflation low and expected to remain contained for some time, and with economic prospects around the globe still more likely to be dismal than encouraging, the potential benefits of sitting tight may be seen as outweighing the potential costs of risking a possible future buildup of inflation pressures.

As a reminder, the implementation of the new announcement policy is slated to begin in March, after it has been published in the Minutes and explained by the Chairman in his testimony. Should the Committee change the symmetry in the directive or otherwise feel that it has made a significant change in its view of the risks, an announcement of that without this preparation might provoke an especially sharp market reaction and an expectation of imminent tightening. In any event, the Committee will have an opportunity to give a nuanced view of its assessment of the economic and policy outlook in the monetary policy report and testimony on February 23.

CHAIRMAN GREENSPAN. Questions for Don? President Parry.

MR. PARRY. Don, I have a couple of technical questions and then a comment. On page 10 of the Bluebook there is a reference that says “the real funds rate is now at its natural rate.” I am familiar with what an equilibrium real rate is; I don’t know what a “natural” funds rate is.

MR. KOHN. I was using it as a synonym for the equilibrium real rate, as in the “natural rate” of unemployment--the same thing.

MR. PARRY. Turning to Chart 4, the top right-hand chart, I was a little surprised at the difference in real funds rates in the simulations, particularly the one called “Lower NAIRU.” Why would that produce analytically such a different real equilibrium rate? The equilibrium rate has to be there somewhere. Do these converge in some year some time out in the future at something different from 3 percent? I’m asking because I don’t think of the equilibrium real funds rate as being 3 percent. Do you?

MR. KOHN. Let me address the first question first: Why is the rate with the lower NAIRU lower than the other two?

MR. PARRY. Or why is the nominal rate so low in that simulation?

MR. KOHN. The reason is that the economy can produce at a substantially higher level with a NAIRU that is one percentage point lower than assumed in the baseline. As a consequence, interest rates need to be lower to stimulate the demand to use that additional production. That is a level adjustment of production out into the infinite future. Production can be higher by a couple of percentage points than at the higher NAIRU, and a lower interest rate is needed to stimulate the demand to use the extra production that is now available at the lower NAIRU.

MR. PRELL. Don, I might suggest that another way to think of this is as follows: If the NAIRU is really more like 4½ percent, we might be around the NAIRU now and looking at the prospect of a steady inflation path, which is the sign that we are essentially around the natural rate of interest. That's different from what is in our forecast, which suggests that we are headed toward an acceleration of prices at the prevailing level of interest rates. I think that's a very simple way to look at that.

MR. PARRY. I see.

MR. KOHN. As for the level of the natural rate, it is higher than it has been in some of the past forecasts, although as I noted it drifts down over time as the wealth-to-income ratio drifts down. I think the height is a result of the fact that the wealth-to-income ratio is a lot higher than we thought it was--or thought it was going to be a year or two ago--given what has happened to the stock market. Demand has been much stronger. In effect the experience, in terms of the level of the wealth-to-income ratio and the strength of demand at previous interest rates, has led us to think that the natural or equilibrium rate is a lot higher than we used to believe and a lot higher perhaps than it has been in history. If the strength of demand for producers' durable equipment and so forth persists, the saving rate, even if it is creeping up, is going to be lower than it has been historically, and then the natural real rate will be high relative to history.

MR. PARRY. Interesting. I have a comment about the simulations. They suggest that we are going to have to make decisions in the next year or so that indicate whether or not we are serious about price stability. Secondly, if I can go back to one of my favorite topics, which is opportunism--clearly locking in the gains to date--there are not many simulations where we lock them in, are there?

MR. KOHN. Except for that price stability one, which does a little more than lock them in, that's right. But that is the underlying premise of the staff forecast that you all talked about yesterday: That the economy is producing a bit beyond its potential. How much beyond is unknown, but it's somewhat beyond. In the staff forecast the assumption is that potential is at a level of unemployment nearly a percentage point higher than where it is right now and that ultimately, over time, that is going to show through in inflation. If you believe that analysis, the simulations show you the implications of that analysis and those assumptions. And then in fact, yes, nominal and real interest rates will have to rise from here.

MR. PARRY. It is very troubling that PCE inflation is 2¾ percent in all of the alternatives but one. In that one it is 2 percent.

MR. KOHN. Right.

MR. PARRY. Thank you.

CHAIRMAN GREENSPAN. The same simulations five years ago had a wholly different level with the same model, as I recall.

MR. PARRY. That is true. You only know what you know at a given time.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, during my years in Chicago, I know I chatted with Milton Friedman about the natural rate of unemployment, but I have managed to spend about 58 years of my life without ever hearing that the NAIRU was confusing economists by its existence. So, taking advantage of not being a Ph.D. economist, let me tell you what I see in comparing Charts 3 and 4, or at least give a possible interpretation.

Chart 3 says that this is the world that used to exist and, based on the last couple of years of experience, probably does not exist any more. But central bankers are supposed to be hardboiled fighters against inflation, so let's make believe that the world is the way it used to be and launch ourselves into a fight against inflation.

Chart 4 says that this is the world that we in fact have been living in rather successfully for the last couple of years. It doesn't appear to me that we have to make an act of faith that it will continue forever in order to think that this world, which produces a much better climate for our citizens, could be allowed to continue. We may get some evidence that in fact this is not the real world--that it has involved a series of lucky breaks and that the real world is going back to something more like what is depicted in Chart 3. If we do get such evidence, we would not want to be in a position of believing that Chart 4 will last forever because that would lead us to make mistakes that would be quite dangerous if in fact the world of Chart 3 were the real world. But based on what we have been seeing, even though we do not fully understand it, the world of Chart 4 seems to me closer to the world we now appear to be living in. And I'm not sure why we shouldn't give that world a chance to endure. Am I missing something?

MR. KOHN. I wondered whether that was a question or not! [Laughter]

VICE CHAIRMAN MCDONOUGH. I had to put in a question mark at the end because this is the time for questions. My question is: Would the gentleman not agree? [Laughter]

MR. KOHN. The gentleman would agree. A key element in interpreting what has happened over the last few years is this: To what extent has there been a fundamental shift in the structure of labor and product markets that will persist? And to what extent do the favorable results of the last few years stem at least partly from factors that are not fundamental to labor and product markets such as the very sharp appreciation of the dollar through the middle of 1998 that lowered import prices, the collapse of economies abroad, the collapse of commodity prices and similar developments? These factors not only lowered inflation directly but helped keep inflation expectations down.

In effect, the staff has chosen to assume it was a little of each. We used to have, not that long ago, a NAIRU of 6 percent or perhaps a little more than 6 percent. We have interpreted the good inflation numbers as reflecting in part a lowering of the NAIRU by ½ or ¾ percentage point, depending on what day we talk to people about it, and in part as the product of some of these other factors. But I totally agree that it is in large measure a judgment call. The reason we showed Chart 4 was to indicate that if you had the other interpretation--that the favorable inflation results reflected almost entirely a change in structure and that the declining oil prices and rising dollar really were not important factors--then you would come out with the lower NAIRU path as shown in Chart 4. These two charts were an effort to give you a way of doing what you just did, which is to compare across charts and make a judgment. But the key judgment relates to what accounts for the good price performance of the last three years and what is the mix between a change in structure and one-time price effects.

MR. PRELL. In a sense there is some link between what you just said and what the Chairman said earlier. I may not have known exactly what charts the Chairman had in mind from prior years' simulations, but if you view what has happened as having benefited from some supply-side shocks, basically those things have become engrained in the inflation expectations. And as long as the Committee follows a policy that doesn't lead to excessive pressures in the market, it can consolidate that progress and continue the lower path. But if these are transitory developments and you pretend or hope that they are changes in the structure, then you could be faced with a very severe turnaround. And what we could be looking at a year or two from now is a much-elevated set of simulations of inflation paths going forward. It is a judgment call that each of you has to make at this point as to just what has led to the positive surprises on inflation. It's not at all clear that it is entirely due to permanent structural changes. I think one can see clear risks in the medical care market, for example, that the benefits from some structural changes there may have run their course and that costs pressures are turning things around in that area.

VICE CHAIRMAN MCDONOUGH. If I could make a comment: I think an appropriate degree of skepticism is no doubt appropriate. [Laughter]

MR. PRELL. As always.

CHAIRMAN GREENSPAN. That is by definition a safe statement! President Hoenig.

MR. HOENIG. Don, having looked at the analysis in the Bluebook and at the various charts, including Chart 3, and having listened to your comments this morning, I want to talk a little about something I mentioned yesterday. That is the possibility of wanting to unwind the actions we took earlier. Last fall we were projecting growth in the fourth quarter to be less than half the growth we apparently got, and we were expecting even lower growth in the first quarter of this year. We took actions to ease partly because of those projections and the financial turmoil that was occurring. We have moved into a much more stable financial environment. You did mention the idea of perhaps unwinding our easing moves. I assume for the sake of discussion that one reason we are not looking more favorably at unwinding at this juncture is the continuing concern and uncertainty about external factors. Is that why you touched on it but did not really develop an alternative for unwinding our earlier actions?

MR. KOHN. I mentioned it as a possibility. That is, to the extent that you were buying insurance against a hurricane and the hurricane season has passed and you don't expect another season, then you don't need the insurance. But in part the decision involves a judgment, in terms of the risks, as to whether the hurricane season really has passed, if I can stretch the metaphor beyond its breaking point. [Laughter] Certainly most of us were pleasantly surprised by how well the financial markets, not only in the United States but in other Latin American countries, weathered the Brazilian crisis. But the crisis is not over yet, so that is still a potential issue.

The other thing that has happened over the last couple of months is that we all were probably once again surprised not only by the strength of the economy but by how well behaved inflation has been excluding the tobacco price increases. In particular, the ECI and nominal wage compensation have exhibited very good performances. That is another factor you might think about going forward. We've not only had positive surprises on the real side, but we have some pleasant surprises still coming in on the price side to balance the other concerns.

MR. HOENIG. That's a good point.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. I'd like to address the point that Bob Parry brought up on whether we have locked in progress on inflation. Let me refer everybody to Chart 13 that Dave Stockton showed yesterday. The bottom panel of that chart shows that if we take out food and energy in the PCE and use the capacity utilization approach, which is in effect a proxy for the lower NAIRU--or in Bill McDonough's terms the issue of whether the present situation can go on--in fact, we have locked it in. The only reason there is a little uptick in Chart 4 is because of food and energy prices. It may be that we want even more aggressive action to get to lower inflation. But if it is true that something like the present regime can go on, which means either that capacity utilization could be a standard or that NAIRU is at about the current level of the unemployment rate, then arguably we have locked in our gains.

MR. PARRY. I don’t understand that.

MR. GRAMLICH. Well, in Chart 13 the inflation rate actually goes down.

MR. PARRY. What about its behavior in terms of the long-run simulation on Chart 4 of the Bluebook?

MR. GRAMLICH. Chart 13 is a long-run simulation of PCE without food and energy, and the inflation rate actually goes down in that simulation. Apparently the only reason it goes up in Chart 4 is food and energy. So if we lock in the endogenous part of prices, leaving aside food and energy, then I think we could arguably say that this regime does lock in the progress on inflation.

MR. PARRY. But that’s not true in terms of the long-term simulation shown on Chart 4, which goes beyond the year 2000.

MR. GRAMLICH. They give slightly different results.

MR. KOHN. If you thought that the capacity utilization equation was the more accurate equation in terms of predicting PCE, then as you remarked yesterday, Governor Gramlich, it would be very much like the lower NAIRU situation. It would indicate that the structure of the economy had changed and that capacity utilization was a better measure than the unemployment rate. Then you would be in the lower NAIRU world rather than the unemployment rate world.

MR. PRELL. You don’t even need a structural change. If somehow, for reasons we don’t understand, capacity utilization really is the true measure rather than the unemployment rate, then that simulation reflects the fact that the level of economic activity is actually below the natural rate of capacity utilization. There is slack in the economy, putting downward pressure on inflation. If you were looking at the unemployment rate and you thought the NAIRU was 4½ percent or a little below, it would be a close call. We are in the neighborhood, but that means we would not have the depressing effect that we would have by looking at capacity utilization. What we noted yesterday is that, as an approximation, that approach may be telling us roughly the same story and not that we are a point below somebody’s notion of the NAIRU at this juncture.

MR. GRAMLICH. So, for these purposes any differences are small, they are hard to predict in the long run, and they may not concern us too much.

MR. PRELL. I would just add a note of caution on the basis of bitter experience, which does not have to be repeated admittedly. When one studies the history of the past few cycles, it is not unusual to see a tendency to reinterpret capacity constraints because the inflation turnaround isn't in sight. I think it is manifest in the current episode that there have been extraordinary shocks in terms of world activity, exchange rate movements, declining import prices, and structural changes in various markets. And there may be still more structural changes on the horizon after the electricity deregulation and so on. A lot of these developments are, in the abstract, in the nature of one-time shocks, which we can't depend on being repeated. But we can consolidate the gains we have made if we are able to figure out where that level of sustainable resource utilization is in this model.

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. This is not so much a question as a plea for perhaps a different structuring of the problem next time around. I think the difference between the world depicted in Charts 3 and 4 is very interesting, but it becomes dramatic only if one assumes that we stay with the policy implied by one or the other for a very long time. I don't know whether we are in the world of Chart 3 or Chart 4, and asking me to decide is silly. There is no way I can know that. What we have to focus on, given that we don't know and that the truth is likely somewhere in between, is what the costs are of making a mistake and how to move back from one to the other if we do make a mistake. I don't know how you could help us think about that, but that is what I believe we need to be thinking about for the next several meetings.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. When I raised my hand, I didn't know there would be so many people talking after Bill McDonough. I basically wanted to associate myself with his remarks. I would associate myself with Alice Rivlin's comments, too. We now have had three years during which economic growth has been faster than most people's estimate of potential and the unemployment rate has been below most people's estimate of NAIRU. Three years is a long time. So, we have a real economy that we can match up against simulations, and I'm not sure why we wouldn't use the real economy rather than some of the simulations. I don't know if you remember the comedian Richard Pryor, but if he were here he would say something like: Who are you going to believe--me and my simulations or your own lying eyes? [Laughter]

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. I am struck as I look at Chart 4 that we are being asked to make an either/or decision. That is, we have to think either that the NAIRU has dropped or that adverse price shocks are going to hit us. Is there no simulation that actually suggests some of both--that the NAIRU may indeed be below 5.3 percent, and perhaps at 4½ percent, but also that these other special factors have been hitting us? It strikes me that that does not necessarily end up being your baseline because your baseline has a somewhat different set of assumptions in it. Even though I understand what Bob McTeer had to say about believing your own lying eyes in some sense, is there a simulation that does a little of both? I'm sure that is doable, but is there one that has been done?

MR. KOHN. We have not done that, though the baseline does do a little of that in the sense that the NAIRU in the baseline is considerably lower than it would have been a couple of years ago. That's part of what the Chairman was talking about. But the baseline does take some of the favorable price and output news as stemming from supply shocks. We have not done an interpolation with an assumption, say, that the NAIRU is 5 percent. But we could easily do that. One can do that visually by looking between the two charts. Then in fact the interest rate would be a little too low, but not a lot. The Committee would have to tighten at some point, but the urgency of a move would perhaps be less than indicated in the baseline. One can do an ocular regression and figure out that we are somewhere in the middle of these two scenarios.

MR. FERGUSON. Okay.

MR. KOHN. I should note that we did the simulation showing the adverse price shocks, the dotted lines in Chart 4, in part to illustrate the power of supply shocks. Those are not very big supply shocks relative to the baseline assumptions. There is a $5 difference in the price of oil and a 1 percent faster growth in benefits costs, which translates into only ¼ percent faster growth in compensation. Those supply shocks noticeably raise the inflation rate. And with the Fed leaning against increasing inflation--not in a really aggressive way but at least by raising the funds rate right away--we get a higher unemployment rate and a higher inflation rate simultaneously with these adverse shocks. Think about the flip side of that. We have had a lot of favorable shocks over the last couple of years, and that has given us both lower unemployment and lower inflation than we would have expected. The dotted line was put there in part to let the Committee members think about that and about what might have been if we had not had the favorable price shocks over the last few years. These price shocks are very powerful in shaping economic performance.

MR. FERGUSON. Let me ask one other thing on the locking-in point. Ned was going back to Chart 13, but doesn't the bottom panel of Chart 4 get to the issue of the long term? That strikes me as suggesting that even if one believes the NAIRU has dropped to the 4½ percent you have assumed there, we will end up in the long run with a PCE excluding food and energy of about 2 percent. I think that goes back to Bob Parry's question.

MR. PRELL. If I understand the construction of this--please correct me if I'm wrong, Don--basically this represents the staff's baseline assumptions naturally extended, at least for the near term. Those assumptions include a rebound in oil prices and the turn of the dollar and so on. So in a sense this is already the lower NAIRU path. It adjusts down the NAIRU, but it doesn't remove that modest reversal of the favorable supply shocks that we have experienced.

MR. KOHN. Including most importantly the depreciation of the dollar.

MR. FERGUSON. Okay, thank you.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. I am attracted somewhat to the construct that Alice talked about of not really knowing where we are between Chart 3 and Chart 4, because I really don't know how much of the good news we have been hearing for the last couple of years is temporary or permanent. But I am drawn to thinking about where we were last August or even last July. At that time, with the fed funds rate 75 basis points higher than it is currently, many of us were thinking--using the usual constructs and equations and so forth and given the resource constraints--that we were facing a real risk of an inflationary increase over the forecast horizon. Some of that, not a lot, was built into the Greenbook forecast as well. At that point, with the fed funds rate 75 basis points higher than it is now, I think we were still betting that we were somewhere between Chart 3 and Chart 4.

We thought we faced an adverse shock stemming from developments in financial markets that we expected to have a big impact on the real economy. We moved the funds rate lower, but the expected impact on the economy did not materialize. So where is our betting now? Our betting, it seems to me, is much more weighted than it was last summer toward the view that everything has changed. A lot of us were not comfortable with that bet last summer. So why isn't Tom Hoenig's logic in favor of reversing a little of the easing not good logic now as a tactical matter, if not as a worry about near-term inflation? I would view that as a way of expressing where we think we really are between Charts 3 and 4. Is that a question? I am trying to find a question! [Laughter]

MR. PRELL. One reaction, though, is that in a sense you are beginning to bring Chart 5 into the picture.

MS. MINEHAN. Yes.

MR. PRELL. That raises the question of whether some of the demand-shock surprises we have been experiencing will be sustained. My sense of the discussion yesterday, as we were thinking about the coloration of the Humphrey-Hawkins report, is that this group might see greater risks that we will have stronger demand, other things equal, than is assumed in the current staff forecast. It does raise the question of whether you want to blend in some of the flavor of Chart 5 in terms of the policy content.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. This is really a question, even though it might sound like a comment! [Laughter] If we try to choose between the world in Chart 3 and the world in Chart 4, I think we have to be somewhat agnostic and have a fair amount of humility. But as long as we're being humble and as long as we're being somewhat agnostic, how do we know there isn't a Chart 5 that represents a different world? How do we know that the NAIRU couldn't be 4 or 3½ percent? If one goes back, for example, to the 1960s there was a lot of talk that we could have price stability and unemployment rates of 3½ percent or certainly 4 percent. I think the term used was "3 to 4 percent." I don't know whether that is realistic or not. I believe if any of us had been asked two or three years ago if we thought we could have a 4½ percent unemployment rate and inflation still falling, we would have said that was a pretty nutty idea. How do we know that the string has run out? How do we know that we can't have a still better world? The question is whether we have looked at that possibility analytically. I ask because I think we do have some historical experience where unemployment of 3 to 4 percent without rising inflation was considered realistic.

MR. PRELL. That proved to be an error, in a sense. The economy got very overheated partly because of the optimism about how low an unemployment rate could be sustained without inflation. To go back to what your eyes have been perceiving, labor markets clearly have been tight and wages have been accelerating. Pressure has been manifest in the labor markets. Now, that hasn't fed all the way through to prices, depending on what measure one examines. If one looks at the core CPI adjusted for the technical changes, that has been accelerating. The PCE measures and the GDP measures look a whole lot better. The answer is not entirely clear. We may have had a productivity surprise that helped. We could get another. I think the case for a substantially lower level of unemployment that is sustainable without a buildup of inflation is perhaps a bit wishful, though I can't rule it out. But we on the staff resist that notion pretty strongly at this point. I would not be as resistant to the notion that the NAIRU might be below 5 percent or maybe significantly below 5 percent. It is hard to be strongly opposed to that notion based on recent experience.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Chart 3 has a price stability simulation, which Chart 4 does not have. I have what I think is a simple question. Roughly speaking, what would the federal funds path be in Chart 4, assuming the NAIRU were lower but the same end result--converging on ¾ percentage point less inflation per year than the baseline--is desired? To get that in Chart 4, presumably we would have a federal funds rate somewhere between the baseline and the dot-dash line. Is that correct?

MR. KOHN. Right. On Chart 3 there is a difference of about 2 percentage points between the inflation rates, and you're talking about a scenario that might result in an inflation rate roughly one percentage point lower than the baseline. So I would take about half the difference between the real funds rates of the two simulations on Chart 3 and load it into Chart 4 to get the inflation rate for that scenario.

MR. POOLE. So Chart 4 is built under the assumption that we are satisfied to converge more or less on the existing rate of inflation. That addresses the question of what we have to do if the NAIRU is lower, if we're satisfied with where we are on the inflation rate. But for those who have an objective of a lower rate of inflation, we'd need to add that to Chart 4 in our discussion of the implications for policy of Chart 4.

MR. KOHN. Right. Looking back at Chart 3, you would have to tighten by about ½ percentage point, let's say, in the near term, but run with a substantially higher real funds rate over the next couple of years, though not as high as in the price stability case.

MR. PRELL. A simple rule-of-thumb exercise using our model is that a 100 basis point higher funds rate implemented immediately and sustained would knock about ¼ percentage point or a little more off the inflation rate in the first year. The inflation rate in the second year would be about ¾ percentage point lower. I suspect there would be overshooting in terms of getting that inflation rate to flatten out.

MR. KOHN. A hundred basis points sounds too--

MR. PRELL. I think that would be more than enough to get you there very promptly, so Don's response of perhaps ½ percentage point sounds about right.

MR. POOLE. At the beginning of this trajectory, where we are right now, even if the NAIRU is as low as 4½ percent we need a higher funds rate to start to work the inflation rate down or we are at risk of actually seeing the inflation rate rise. That is what the baseline tells us even at the current unemployment rate.

MR. KOHN. Right, that's the lower NAIRU scenario.

CHAIRMAN GREENSPAN. Anybody else? If not, let me get started and try to focus on some of the same issues that many of you raised.

The Committee discussion that we had yesterday elicited general agreement around the table that, with the exception of energy, agriculture, and some manufacturing and mining industries, the economy has been exhibiting substantial, and what many analysts regard as unsustainable, strength. The strength is especially evident in interest-sensitive areas such as housing and light motor vehicles. That, of course, would suggest that our monetary stance is too loose and unless economic growth slows quickly, the failure to tighten will reaccelerate inflationary pressures. Many of you have noted that the sequence of crises and decided weaknesses abroad clearly have had no broadly negative impact on the rate of growth in the United States, at least not yet.

I have not heard it argued specifically, but our 75 basis point action last fall was directed at countering a freezing-up of financial markets, which constituted a demonstrable threat to the stability of our economy, and arguably we have largely succeeded. It is true that one can still observe some residual impact of the liquidity problems that we have experienced, with yields on junk bonds remaining significantly above Treasuries and even obligations rated A and AA still running spreads against Treasuries that we haven't seen for a very long time. If it is correct that we have succeeded, then one could argue that we ought to reverse at least part of our easing moves. There has been a legitimate concern about stock prices that, as an inadvertent side effect of our easing actions, have returned to record levels--a development that clearly has augmented effective demand.

All of this makes a compelling case, indeed. There is little question in my mind that, unless we see a pronounced slowing in the expansion of economic activity, some form of preemptive action may be called for. I say "preemptive" because there is remarkably little evidence that inflation pressures are building. There is none in the data, and I heard very little commentary about price pressures in our round-table discussion yesterday. Everyone was arguing that the pressures were there, but no one was saying, at least that I heard, that anything was happening to prices as a consequence. Indeed, the CPI change for December, if we take out the tobacco price increase, was slightly negative for the total CPI and only slightly positive for the core CPI. The same is essentially true for the PCE data. If this is inflation, something is wrong with our data system. The point is that we are at the tail end of a series of years in which, by all our historic measures, growth has been above trend. Price pressures should be mounting at this stage, but instead they are going in the other direction. This involves, in my judgment, a major issue that we need to understand before we move forward with a policy shift. The discussion that has just been joined relates precisely to this issue.

I find the resumption in the fourth quarter of the steep decline in the number of those seeking work to be the most compelling evidence of an unsustainable, and perhaps an unstable, economic expansion. That statistic, of course, includes the unemployed plus those not in the labor force who nonetheless say they would like a job if they could get one. You may recall that through the first three quarters of last year we had a sharp divergence between the still strong growth of payroll employment and the apparently stagnant growth indicated by the household data. The surge in household employment and the decline in unemployment in recent months have now fully closed the gap.

Our great dilemma is that although the labor market has tightened, and tightened quite appreciably in a statistical sense, gains in compensation per hour have slowed! It is not that they haven't risen, but their growth has slowed. Doubtless, the ECI change for the fourth quarter is biased downward. As I have indicated before and as a number of you have argued, it is very likely that to some extent wage increases are being masked as promotions in one form or another. But even if the ECI is biased in that regard, compensation per hour is not. Preliminary data for compensation per hour in the fourth quarter, at least for the nonfinancial corporate sector that I believe probably mirrors the total, indicate an average annual growth rate of 3.7 percent. That is down from an average of about 4 percent in a number of previous quarters. Indeed, for the nonfinancial corporate sector, it was running 4.4 percent in the middle part of last year on a four-quarter-change basis. For the fourth quarter of last year, year-over-year, it was estimated at 4 percent.

Moreover, despite our tightened labor markets, when we disaggregate the data, there is only very weak evidence of significantly greater compensation gains in areas where the unemployment rate is demonstrably below the national average. The national average unemployment rate currently is 4.4 percent. Gary Stern was mentioning yesterday that Minneapolis had a 1½ percent unemployment rate. Their manufacturing wage increases over the past two years have been close to the national average. If we look at other cities, Boston with an unemployment rate of 2.2 percent has had average hourly earnings increases over the last two years only somewhat higher than the national average. Indeed, the only two cities on my list with low unemployment rates that have experienced wage increases significantly above the national average are Charlotte and Richmond. What are you doing, right or wrong, Al? [Laughter] San Francisco has a 2½ percent unemployment rate, and its average hourly earnings growth over the last two years is about average. Denver unemployment is 2.6 percent, and its average wage increase is well below the national average, as indeed are the increases for Phoenix and Dallas. So, there is very little evidence, granted all the qualifications we want to make with regard to these data, that the NAIRU is alive and kicking. It may exist, but it certainly is in hiding, no matter how we look at it. Using NAIRU in our structural models is in effect like using a phantom. Chart 4 in the Bluebook is the real world; the NAIRU got lost somewhere.

If we look at compensation gains, they are virtually fully matched by the acceleration in productivity. Total unit costs over the four quarters of 1998 rose just 0.2 percent. Indeed, unit labor costs for nonfinancial corporations over the latest four quarters, as estimated by Larry Slifman who never makes a mistake, increased only 0.2 percent. That estimate is comprised of compensation per hour of 4 percent, as I mentioned before, and productivity growth of 3.8 percent. The productivity growth figure for the fourth quarter is 4.8 percent, preceded by 4.7 percent in the third quarter.

Clearly, something is happening. As I said before, absent the cigarette price hike, we cannot find inflation in either the CPI or the PCE index for December, and we surely do not find it in the pipeline data anywhere in the system. I submit that interpreting these results requires a fundamental reassessment of how we look at the world. I will take a shot at this and try to describe what I think we know and what we don't know.

How is it possible, first, for hourly compensation growth to be flat or falling in an ever-tightening labor market? Let me begin by suggesting what does not explain it. You may recall that two or three years ago I was arguing that fear of job obsolescence was a major factor suppressing the nominal increase in compensation per hour. That factor clearly has not gotten worse; if anything, it has eased. The International Survey Research Company is the source of the data that I was quoting back in 1995 and 1996, as you may remember. When workers were asked whether they frequently were concerned about being laid off, 46 percent responded "yes" in 1995 and 1996 compared with figures in the teens or in the twenties throughout the 1980s. The 46 percent number is now down to 37 percent. Statistics on job leavers, another indicator I would use, likewise do not indicate any significant change. So an increase in uncertainty and the fear of job loss amongst workers cannot account for this extraordinary combination of low unemployment and no acceleration in hourly compensation.

The evidence, anecdotal and otherwise, suggests that the explanation lies in pressure coming from employers, who have apparently lost virtually all pricing power--

an issue that a number of you raised in our discussion yesterday. We saw quite similar episodes during the long period of the gold standard, which produced price stability on average prior to the 1930s, although obviously there was a lot of price volatility. During that period, wage increases were limited by the exogenous price capping of the gold standard.

The technologically driven process that is breaking down barriers to cross-border trade today has apparently created an environment that simulates the old gold standard forces. One way of looking at this is that in earlier decades when there may have been excess capacity or excess potential in one part of the world, it didn't matter because that excess could not be moved to another part of the world. But in the current more technologically advanced environment, as barriers come down we get an increase in potential supply relative to total actual physical capacity in the world economic system. And it is conceivable, but by no means provable, that globalization--the major force that people are talking about--may be having an impact on the price level, and our price measures may be reflecting that. It may also be, with regard to my previous discussion of compensation gains, that the data are capturing that phenomenon, although the argument I am making is global as distinct from a specific manufacturing issue.

The argument is basically that tradable goods prices are being significantly held down by excess world capacity and that the arbitraging into the nontradable goods areas that occurs within economies, largely through wages, is the reason why service price inflation, which arguably has very little in the way of direct international globalization components, also has been restrained appreciably. In the United States this process has been augmented by a dramatic increase in the backlog of new technologies, which is an issue we have discussed in the past. This really gets down to the question of whether the synergies that have evolved over recent years have created a large pool of potential capital investments that firms can dip into to obtain a rate of return in excess of the cost of capital. We have seen considerable evidence of this in the sense that rates of return everywhere seem to be moving up.

There has been a very interesting pickup since 1994 in the average rate of price decline in the high-tech area of the economy. Through the early 1990s, the deflator for computers, communications equipment, and other high-tech goods was going down at an annual rate of about 4 percent. Starting in 1994, the rate of price decline fell off the chart, and the most recent data suggest that high-tech prices are dropping at an annual rate somewhere in the area of 17 to 18 percent. Thus, even though that sector's share of GDP is only a few percent, these price declines are having an appreciable influence on the overall inflation rate.

What this implies is that we are getting a rapid increase in opportunities for investment in new technology. It is overwhelming the expansion of demand, and the acceleration in the downward adjustment of prices suggests that we have a very large backlog of unexploited investments that, as they are implemented, are displacing labor and effectuating a very significant increase in multifactor productivity. That in turn has spilled over into labor productivity. Indeed, estimates produced by the staff's econometric model suggest that we have seen a fairly dramatic pickup in recent years in multifactor productivity consistent with this process.

I don't believe that transitory factors can explain the failure of models to forecast successfully in recent years. I suspect that what we have here is a missing variable, if I may put it that way. Certainly, judging from the slowing in the rate of PCE inflation, supply generally appears to be overwhelming demand despite the evident continued decline in unemployed job seekers. I might say parenthetically that the level of these job seekers--that is, the sum of unemployed plus those not in the labor force but seeking a job--is currently ten million; and it has been falling by almost one million annually. We have no way to judge how far down that number can go before there occurs an inevitable acceleration in nominal wage demands. Unless the laws of supply and demand have been repealed, there has to be some level of labor market tightness at which nominal wages begin to accelerate. The truth of the matter is that we don't know where that is; we only know that the number of job seekers has been reduced by almost a million in each of the last several years, and nothing has happened. That is like my falling off a building and saying when I reach the fifth floor on my way down that I am in great shape. Something has to give, but we don't know when. I think the presumption that we do know is very difficult to maintain.

The Greenbook forecast of a renewal of inflation statistically rests in part on a marked decline in the growth of multifactor productivity, and hence in the growth of output per hour. Indeed, without a slowing in multifactor productivity growth, we obviously could not have a deceleration in labor productivity growth unless we significantly lowered the forecast of capital deepening or labor quality, and that is very unlikely to be the case. So what we have is a projected slowdown in multifactor productivity growth, which is based in turn on a substantial slowing in the pace of overall economic growth. I am not saying that the internal workings of the model actually have that linkage; they do not. Nevertheless, if you plot the multifactor productivity that is implicit in the staff's forecast along with the change in economic activity, you will see a fairly high correlation. I assume that the reason we have this dramatic falloff in multifactor productivity growth in 1999, after very strong gains in the two previous years, is the forecasted slowdown in economic growth.

But if the slowdown in economic growth does not occur, then presumably productivity growth will not slow much either. And unless there is a really dramatic rise in nominal wage increases, unit costs will not move very much. I am having difficulty knowing where this higher inflation in the model forecast would come from if I leave that out. That is especially the case when the pairing of multifactor productivity growth and low unit costs is essentially combined with an oil price increase to get the CPI increase. As we discussed yesterday, the oil price increase is based on the presumption that we know more than the market about the long-term direction of the price for West Texas Intermediate. Now, that may well be the case, but history has been less than helpful in that regard. I would not bet the ranch that one could buy December futures for WTI and know for certain that it would result in a profit.

Our structural and VAR models that are projecting this price acceleration are not properly specified, in my judgment, unless some means are found to capture the technologically driven price-capping variable. Lagged dependent variables do not do it. VARs may appear to give us good results, but they are begging the question on the crucial missing variable.

Moreover, it is evident that whenever nominal wage pressures have surfaced, producers have chosen to dip into the available technology to substitute profitable capital for labor. This has made the growth of potential output per hour variable; indeed, it's a function of nominal wage increases. The reason is that if nominal wage increases pick up, there is clear evidence in recent years that producers will endeavor to dip into that untapped pool of technological capital projects. We have had many anecdotal conversations on this subject. We had a discussion yesterday in which I mentioned talking about this issue with the head of British Telecom. He was saying that the availability of new technologies and synergies is accelerating at such a pace that they don't know what to invest in. Everything is terrific. It is a question of which of the individual rates of return is higher. They are all above the cost of capital. Larry Meyer mentioned a discussion he had with a senior Microsoft researcher who was confirming the same thing. Something different is happening here, and our models are missing a crucial variable.

As we all know, when econometricians get regression results that appear out of line with the real world, as Bob McTeer was saying, they have to look for the missing variable. I submit that there is a missing variable, and we are learning more about the nature of its characteristics. I think it may be about time to try to substitute this variable for NAIRU. Let me put it this way: Neither one is an observable phenomenon, but neither was the planet Pluto before 1930. Scientists figured out that there had to be something there, given the extent to which Uranus and Saturn were deviating from their forecast orbits. Well, I submit that at some point we are going to come to the conclusion as statisticians that the simultaneity of a falling inflation rate and an ever tightening labor market is trying to tell us something. My plea is that we try to do something to see whether we can get some answers that do not give us Chart 3 and Chart 4, which in their present form are not terribly helpful.

There is very little evidence at this stage that the expansion is slowing. I know it is supposed to decelerate significantly in the first quarter, and I don't deny that the motor vehicle segment is going to reduce it by some 2 percentage points. I also gather that we will get some further deceleration from government and probably from trade. But these are forecasts. As of the moment, we have a 5.6 percent annual rate of growth in the fourth quarter, and the impression I have is that that number will be revised up, not down. In the first quarter, some points may be taken off the possible 6 percent fourth-quarter growth number, but it has to go down by a significant amount. I recognize that productivity increases cannot explain all of the growth because if they could, then we would not be getting a reduction in the total number of people who are either unemployed or out of the work force looking for jobs. So, something has to give here at some point.

The inflation rate, as we measure it, is at zero currently; if we got the measurement right, it probably would be negative. Given that there is still some bias in these statistics, we certainly can wait a while. But it is conceivable that the data we are going to see in the weeks ahead will confirm something that we have not seen to date, namely underlying inflationary forces. I don't mean strong economic growth. That tells us little except that productivity is accelerating. But what is happening in the labor market may tell us something. We may indeed find that the labor market issue is becoming significant. We may find when the data are published at the end of the week that average hourly earnings will show a spike, and we may see another spike the month after. Clearly, that would suggest that something different from what we've been seeing is happening.

What I would recommend after this long discussion is that we stay where we are at the moment. I would be disinclined to go asymmetric toward tightening at this stage because the data may turn out to be softer than I suspect, and flipping the symmetry back and forth would not help us. If it turns out, however, that the labor market data we get on Friday really tighten up or if the data we get on the CPI or the PPI show that something is stirring, I think a fairly strong signal in the Humphrey-Hawkins testimony that we might tighten would be wholly appropriate. Indeed, I would say it would be highly desirable. I don't think we have reached that point yet, but I can readily conceive of the possibility that we will.

I would suggest that we wait a few weeks before we show our hand and leave it for the Humphrey-Hawkins testimony to suggest some asymmetry toward tightening if that seems appropriate. If I were to sum up the general discussion at this meeting, I would say that the consensus is probably a shade in the direction of asymmetry. I request that we do not adopt asymmetry, but that really depends on our strategy. I don't sense any pressure to move today, but I do detect some inclination on the part of a significant number of the Committee members to move in the direction of asymmetry toward tightening. I frankly would prefer not to do that. Whichever way we go will probably have zero impact on when and to what extent we move or do not move in the weeks ahead or on what we decide when we meet again on March 30. If inflation were not actually dead in the water at this stage, I would say that we would have to be far more concerned about being preemptive. I don't see the necessity for that at this moment. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I fully support your recommendation. Clearly, it seems inappropriate to change policy. And with inflation dead in the water, I also believe this is not the moment to go asymmetric toward tightening. I agree that the Humphrey-Hawkins testimony gives you, representing the Committee, an opportunity to discuss that. With the additional data becoming available between now and that time, I think that's the right thing to do.

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. I also strongly support your recommendation, Mr. Chairman, for the reasons ably stated by the Vice Chair. But I would be a bit cautious about sending a signal in the Humphrey-Hawkins testimony. We have seen so little inflation that I'm not sure we will see anything in the near term that could convince us that we should move up soon.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. I certainly support your recommendation, Mr. Chairman. Let me make a few somewhat random, but hopefully not too random, comments. First of all, I enjoyed your analysis, especially the point about the importance of global capacity and the arbitrage between the manufacturing and service sectors. It is something I have been trying to convince my staff of without a great deal of success to this point, and perhaps you have aided in that effort.

I must say I am a little puzzled by the fascination with NAIRU. I thought work done by Stock and Watson and others suggested that if there is a NAIRU, it lies somewhere between 4 to 7 percent or some range like that, which is quite wide. If that is right, it is not a terribly useful concept for policy. So, I have been reluctant for some time to go down that path very aggressively.

Let me also add a thought about wages and compensation. At least as far as our employees are concerned, and this is confirmed by the labor leader on our board as well, the issue we hear most about is the scarcity of time. What many employers are doing--I know we are--is offering more flexibility in work hours to make it easier for people to do the routine tasks of running a household and taking care of family obligations that obviously take a lot of time. My guess is that at the end of the day this is probably productivity enhancing. If it shows up in wages or compensation at all, it may not affect unit labor costs adversely if it has a positive effect on productivity.

I am a little suspicious about attributing a lot of the recent favorable inflation performance to special factors. Back in my youth when I was doing bottom-up forecasting, one could always find special factors to explain virtually everything. It seems to me that this subdued inflation behavior has gone on long enough now that it probably reflects a lot more than special factors. And I am struck by the fact that most, if not all, of the major central banks around the world are committed to a low inflation policy. The fact that we are getting low inflation and some surprises on the downside is perhaps not so surprising, if you get my drift. That to me is the policy regime that we probably have in the world today.

The one thing that concerns me in the current situation is a communications issue. I have the perception that financial market participants and others feel that we cannot change policy in either direction in the current circumstances and that we will not. I certainly don't feel that we should any time soon, but I do think we should make an effort to communicate that indeed we are prepared to change policy if and when it is appropriate to do so. As for what we might point to as a rationale for changing policy in either direction, right now I don't think there is any such rationale, which is why I came out where you did. But it seems to me that we would want to put people on notice that indeed we are prepared to move under some circumstances. We might want to call people's attention to money growth, exchange rates, nominal interest rates, the bond market, and so forth, and say they have informational content and that we are going to be paying attention to those variables among other things in assessing the appropriate stance of policy going forward.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Mr. Chairman, I support both halves of your recommendation. I also want to comment a bit on the strategy, which I strongly endorse. As I said yesterday, in periods when models do not seem to be working very well--and we seem to be in one of those periods--I think it is quite important to weigh the incoming data more heavily. To some extent that is what you were suggesting. That doesn't mean that our hands are tied in any sense. It does mean that once the data become clearer, we should be prepared to move. And I sense that that is where we are.

I'd say one other thing. You put some emphasis, appropriately, on productivity. But we are aware that productivity is quite cyclically related, and I'm not sure we have parsed out those cyclical differences well enough yet. There may be some studies of the data that do that. One of the things we have to continue to look at is the degree to which we can pull apart the cyclical components from the underlying changes in productivity.

I also would agree with President Stern's point with respect to NAIRU. It has never been measured very accurately, and I'm not sure it is going to be measured any more accurately in the future. It is an interesting concept, but we should not put too much weight on it for policy purposes.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Mr. Chairman, I support your recommendation. I would like to talk a bit about what I regard as a very important issue, which Larry Meyer emphasized yesterday. And that is that we need to be talking not just about the setting of the federal funds rate, but about the policy strategy from which the current rate setting arises.

It is clear that the central fact occupying us is this ongoing surprise in the relationship between real activity and the rate of inflation, which we call the Phillips curve. The Phillips curve framework has been around in its current form essentially since the late 1960s. We have worked with what we call the expectations-augmented Phillips curve. I believe there is far too much emphasis on the NAIRU and not enough emphasis on the expectations part of the behavior in these markets. To me the experience over the last couple of years indicates that expectations trump the unemployment rate in determining the current rate of inflation--that the expectation of continuing low inflation is the factor dominating this outcome.

Firms say over and over again that they don't have pricing power, and that is because their competitors won't follow any price increases they have tried to put into place. Competitors behave that way because they think the inflation rate will remain low and, therefore, if they can retain control over their costs, they are happy to grab more market share. So prices remain very much under control.

I agree with you that emphasizing the exchange rate and oil prices as special factors is not the way to look at those variables. Those above all are expectational variables. Oil is a storable commodity. Oil is behaving so well in good part because it is expected that prices will remain low in the future. Oil is not a good store of value any more with the rate of inflation down. The same is true of the exchange rate. It has behaved so well because of the sustained low rate of inflation in the United States.

Now, that does not mean that the unemployment rate is not below what is sustainable in the long run. There are so many stories about the existence of labor market pressures and shortages and so forth that we probably are operating below the NAIRU. It is just that the expectations part of it is dominating the outcome in terms of the current rate of inflation.

The ideal situation, if we knew how to do it, would be to peg the rate of inflation at a very low level and go for price stability, letting the real economy run wherever it wants to run. What we would all like to see happen is to have the maximum possible employment and productivity growth consistent with price stability. The problem is that there seems to be so much evidence that the real economy leads the cyclical process, with inflation coming later. So, to say that we can ignore the real economy in setting current policy seems to me likely to be a mistake in the long run.

Therefore, I come down to saying that we are going to have to pay attention to the fact that the real economy is growing very vigorously and that the unemployment rate is low. We should not ignore the anecdotes about very tight labor markets. Credit conditions and monetary growth are both very clearly on the stimulative side. The financial turmoil that motivated this Committee last fall appears to be mostly behind us. Over the course of this year, starting sometime this spring, I think it is going to be appropriate to be tightening up on the funds rate.

I would like to come back to the original point that I was making about the importance of expectations. I think we need to do everything we can to seal in this expectational environment. That is what makes all this possible in my view. That means that if we get some bad news on the inflation rate, we need to be prepared to pounce in order to demonstrate that we are not going to let that continue. To show that we take inflation very seriously is to me the most constructive thing we can do. Whether or not we want to act before we get some uptick in inflation is another matter. But we are not faced with that issue immediately at this meeting. Thank you.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. I support your "B" symmetric recommendation. I believe watching and waiting is the right approach at this point. I think most of us feel that we are sitting on a situation that is really very positive; or at least our experience over the last several years has been favorable. We may have some inner sense that it will not last or that we are going to have to do something over the next few months. Maybe we will or maybe we won't. I have a completely open mind as to what the next move on policy might be. I do think that when reality tells us something different from the models that we ought to take a new look at the models. Your contribution this morning was helpful in that regard.

As far as NAIRU is concerned, my personal view is that it is a useful analytical tool for economic research but that it has about zero value in terms of making policy because it bounces around so much that it is very elusive. I would not want our policy decisions to get tied all that closely to it, especially when most of the NAIRU models have been so far off in recent years.

As far as your testimony goes, I think it would be appropriate to lay out the possibility that we may have to tighten and for you to describe the kinds of circumstances that might lead us to that. On the other hand, that discussion ought to be balanced in the sense that there may be a set of circumstances in which we do not have to tighten. So, the possibility of tightening ought to be raised, but the possibility that we might not have to tighten also ought to be discussed.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, I am satisfied with your recommendation. As I mentioned yesterday, we have put some additional stimulus into the economy over the last several months and I think there is a case to be made for some unwinding of that, perhaps in the not-too-distant future. Depending on unfolding developments, that might be appropriate to mention in your Humphrey-Hawkins testimony, as you suggested. So I am fine with your recommendation.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Mr. Chairman, I like your recommendation, including the handling of the symmetry issue. I hope, like others, that you will use the Humphrey-Hawkins setting to put people on notice that we are in fact prepared to tighten if circumstances suggest that is appropriate.

I was particularly pleased that you resurrected the notion of "preemptive" policymaking this morning, something we have gotten further and further away from as we have gotten caught up in the euphoria of good experiences recently. Last night I was reflecting on yesterday's discussion and I was struck by how many of us have fallen back on our models recently. I know we have all been using them, but we talked about them more yesterday than in the past. I think we did that perhaps as a second check on our loss of peripheral vision, as a check against just going on our instincts. Those models, even with their flaws and possible missing variables--and you gave them another licking this morning--do serve to remind us that there is a danger of making the mistake of waiting too long to tighten policy and that there is in fact a price associated with that. So I am pleased that we at least have left the door open to a preemptive move. Thank you.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. As my comments over the last couple of days probably have indicated, I can accept not changing policy but I am a little more uncomfortable with not changing the symmetry.

In our meetings last summer we discussed--though you were much more expansive in your discussion today--the various aspects of what is going on and how difficult that is to measure and to capture in our equations. But it is easy to see, if one looks at it closely, that in terms of global capacity and changes in technology and so forth you could have given that same speech last July. To some extent you did. We had forecasts then that looked toward no change in policy going out over a period of several years and the trajectories didn't look terribly different from what we are looking at now, in that growth was a little slower and we had some small pickup in inflation. As I recall, your Humphrey-Hawkins testimony reflected that in July. Some of us were uneasy then, and we had a bias toward tightening at that point in time.

What has changed? We experienced some financial turmoil. We changed monetary policy to provide protection to the real economy. The need for that has largely dissipated. We have an easier monetary policy now, and we have the same kinds of concerns that were disturbing me at least in the spring and the early summer. I'm talking about credit conditions, monetary growth conditions, stock market conditions, and asset market conditions more generally that seem to be stoking things to a point where, no matter what one feels about the future, we could be facing some real problems down the road. The higher everything flies, the farther it has to fall.

For me anyway, it is not a situation of when we see the "eyes of inflation" but of what we are building in with regard to overall conditions. I think that relates to the expectations issue. It feeds into what people expect. I don't have any problem with it right now. But if people continue to see not just the same market conditions as last year but those same market conditions and an easier monetary policy, there is a point where they will begin to think that we aren't going to change our policy--that nothing can convince us to change in a preemptive fashion. That could feed into a negative expectations process that will defeat us in the end. So I am very worried about where we are. I do not have a vote so I can't dissent, but I am really concerned.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. When I think about the inflation process and the inflation dynamic, I always point to two things: excess demand and special factors. I don't know any other way to think about the proximate sources of inflation. When I think about excess demand, I think about NAIRU. If we eliminate NAIRU and that concept of excess demand, it moves us into very dangerous territory with monetary policy.

I would remind you that in the 20 years prior to this recent episode, the Phillips curve based on NAIRU was probably the single most reliable component of any large-scale forecasting model. It was very useful in understanding the inflation episode over that entire period. Certainly, there is greater uncertainty today about where NAIRU is, but I would be very cautious about prematurely burying the concept.

I was also surprised to hear how many people believe that special factors--the appreciation of the dollar, health care cost developments, and so forth, which I feel have been so important over this recent episode--have been so immaterial in their views of inflation. Declines in oil prices from $26 to $12 per barrel seem to me quite relevant in understanding the recent inflation experience. So, I think we have to keep some balance in this.

Even if productivity growth has moved upward, we know it has been above trend because we know the unemployment rate has been declining. So I come back to my story about the incremental Taylor rule. If you think NAIRU is as low as 4½ percent, fine. But that still means to me that if the economy is growing above trend, there is a considerable prospect that it will continue to do so and that we should put some discipline in monetary policy by leaning against the cyclical winds. Otherwise, every time there is an upside demand shock, we will allow monetary growth to accelerate to accommodate it and wait for the day of reckoning.

In terms of symmetry and asymmetry, the risks seem reasonably balanced around trend growth. Does that mean we should have a symmetric or an asymmetric directive? The problem I have is that I believe the initial conditions are such that we are already operating beyond the point of sustainability in labor markets. If we have balanced risks around trend growth, that tells me that we should have an asymmetric directive. Growth a little lower than trend would not call for any easing of monetary policy, but any growth above trend would call for a tightening of monetary policy.

Mr. Chairman, I can certainly accept your recommendation and wait a little longer on the asymmetry story. But I hope some of these concerns will be reflected in your testimony. Thank you.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Mr. Chairman, I am happy to support your recommendation for sitting tight. I think Larry Meyer made a useful contribution yesterday. I have been thinking in my own mind about how to resuscitate the Taylor rule. I may not agree with everything he said, but I view it as a reasonable strategy. One thing it means is that as soon as we see evidence of any acceleration in inflation, we have to move against it. I'd say that almost everybody around the table would agree with that.

Models have taken a hit this morning, so let me say a good word for them. For many years they have been a useful framework for thinking about the economy. Actually, I think the staff should be commended for this week's presentations because they have employed models very well in illustrating the issues, even though the models did not resolve all uncertainties. The models say that we ought to be a little nervous about the current situation, and I am, even though I am happy to sit tight and follow your recommendation. On the other hand, you and others have made some very telling criticisms of the models, and a lot of you set your staffs to work on points that came up at the last meeting. Some points have come up at this meeting that would be worth exploring. Bill Poole raised a point about expectations. For a long time, how to factor expectations into the models has been a real puzzle. The treatment of expectations has always been fairly haphazard, and it may be that expectations are much more important now in a different way from what has been built into the models. We ought to take a serious look at that.

You also raised a very important point on the price-capping issue. I don't know exactly what adjectives to use to describe it. I consider it important; I have been mulling it over myself. It may be time, and there may be enough data, to try to work that into the models. Let's try to have the models step up to the challenge and see if they can deal with some of these issues that clearly ought to be dealt with. Thank you.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Mr. Chairman, in terms of the earlier discussion about the way the world works, I want very much to believe my lying eyes but I am having difficulty doing that. I don't doubt that there is a missing variable out there. Your point on that is very well taken. But the fact is that we really don't know what it is exactly. We do not yet have a very clear understanding of its strength or its likely persistence. That is the background against which I will present my own way of approaching the current situation.

The comments that Larry Meyer and Cathy Minehan made, and especially Bill Poole's comments on expectations, really resonated with me in terms of the way I view the world today. It seems to me that even if we knew what this missing variable was and could somehow specify it and analyze it, we still would very likely conclude that domestic demand is growing at an unsustainable pace. I think we would also suspect that in the months immediately ahead it may be sustained and even boosted by the lingering and lagged effects of the easing actions that we took last fall and possibly also by the strong growth in the monetary aggregates. I worry about where all of this is going to take us. What worries me the most now is that the markets seem to be discounting almost completely--others have made this same point--any tightening action on our part, despite these continuing upside surprises in the data. At a minimum we need to send a clear signal that there is at least a possibility that at some point in the near term we might tighten. I think that would help sensitize the markets. There is a ball game going on here and we just are not in it. We need to get back in it in some way so that if we have to act on short notice, or maybe on no notice, at least we will not be so much of a lightning rod.

I am probably the only person in the room who feels this way, but I believe one could make a case for undoing at this meeting some of the easing that we did last fall. Actually, in the Bluebook on page 19 the staff made a good case for that. Of course, they made some other cases as well. That's the problem. [Laughter] Speaking for myself, I would strongly prefer an asymmetric directive this time. If we don't do that, I hope, as you have already suggested, Mr. Chairman, that you will strongly signal in your testimony that there are upside risks in the current situation.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, I support your recommendation with regard to the federal funds target. But I share many of the concerns that have been expressed by my colleagues, particularly President Minehan and Governor Meyer.

I also believe that it is less clear, certainly less clear than at the last meeting, that the risks to the outlook are symmetric at this point. I think a case could be made for asymmetry, but we will be getting lots of information between now and the next meeting and perhaps we can probe that issue more deeply at our next meeting.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. I agree with and support both parts of your recommendation.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. Mr. Chairman, I certainly support your recommendation. But I also would like to associate myself with the many concerns and reservations that have been expressed by a number of members of the Committee.

Let me add just one additional brief caution. We frequently speculate about whether or not this Committee should or should not be preemptive. If we believe, and I think we all do, that policy affects the economy with long and variable lags, then we should keep in mind that we are always, every day, unavoidably being preemptive. Even taking no action at a meeting is preemptive, in the sense that any decision is going to impact the economy a year or two years out, or however long those lags may turn out to be. I think it is useful to keep in mind that we are always being preemptive.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. Quite a few references have been made to the role of expectations. I did not come into this meeting with any expectation that there would be an adjustment in the funds rate at this meeting. I didn't know what the reasons for not making an adjustment might be, but I did not expect an adjustment. However, I still stand by my dissent on the cut in the funds rate taken in November, and I think it should be reversed. I don't think this would be the time to do it, with due respect to Al Broaddus and others whose views are that perhaps it should be done now.

A reason for acting at this time that I would not find desirable would be that the economy is growing too fast. In fact, there is a potential that the economy would not grow so fast if we tightened at this meeting. There is the potential for an unfortunate, undesirable misinterpretation, coming after last Friday's report on real growth, that the Committee thinks that there is too much growth and too much employment and that we are unhappy about that. That would not be desirable. In fact, I believe we ought to go the other way by trying to emphasize how delighted we are with this strong growth, how delighted we are with the low unemployment rate, and how delighted we are with low inflation and, therefore, we did not take action.

Nevertheless, expectations going forward are going to be a dominant concern to us and to everybody who watches us. As much as we and the world are happy that the average level of current consumable goods and service prices is not changing very rapidly, that is the necessary condition for successful monetary policy but it is not a sufficient condition. If it were a sufficient condition, we would still be under the gold standard. In fact, the Federal Reserve would not exist if it were a sufficient condition. We have had cases in our history and cases in other countries' history where the present price of claims to future consumption moved very substantially--sometimes too far up and then sometimes very rapidly down. This creates financial instabilities that are unhealthy for the performance of an economy. Otherwise, 1907 would not have happened; 1893 would not have happened. Central banks and monetary policy are designed to try to correct some of the flaws inherent in a pure gold standard type of environment. That means that we have to take into account things, such as the present price of future consumption, that are missing in our usual measures of goods and services prices.

For some time, people have been purchasing equities in the expectation of selling them to somebody else at a higher price, with not a thought as to what the earnings potential or real value is--and it's probably more than just my three kids. [Laughter] There are people making real estate investments for residential and other purposes in the expectation that prices can only go up and go up at accelerating rates. Those expectations ultimately become destabilizing to the economic system.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. It is clear from our discussion that there is a lot we don't know. I think we all feel this conflict--I certainly do--between what economic theory and economic models are saying on the one hand and what we have seen as the reality in recent years. We all have been over-forecasting inflation and under-forecasting growth for at least three years. Someone raised the question as to what has changed. The way I look at it, the longer it goes on, the more it becomes such a puzzle and the more one questions it. So I certainly agree with the thrust of your comments that we should be questioning our forecasting models with regard to the help they give us in policymaking.

But having said that, I am concerned that our current monetary policy stance may be too loose because of the actions we took last fall. I don't think the risks are strongly skewed toward the upside, but I believe they are somewhat skewed to the upside at this point. I agree with the comments that have been made today that we have to be prepared to move very quickly when we see some evidence of inflation in the pipeline. It doesn't have to be in the actual numbers, but we have to be sure that we see some evidence. Clearly, we have not seen any evidence in recent years. So, I support your recommendation at this time. But we have to be very, very vigilant.

CHAIRMAN GREENSPAN. There is a substantial majority in favor of "B" symmetric and I would like Norm to read the directive accordingly.

MR. BERNARD. This language begins at the bottom of page 23 of the Bluebook: "To promote the Committee's long-run objectives of price stability and sustainable economic growth, the Committee in the immediate future seeks conditions in reserve markets consistent with maintaining the federal funds rate at an average of around 4¾ percent. In view of the evidence currently available, the Committee believes that prospective developments are equally likely to warrant an increase or a decrease in the federal funds rate operating objective during the intermeeting period."

CHAIRMAN GREENSPAN. Call the roll.

MR. BERNARD.

Chairman Greenspan	Yes
Vice Chairman McDonough	Yes
President Boehne	Yes
Governor Ferguson	Yes
Governor Gramlich	Yes
Governor Kelley	Yes
President McTeer	Yes
Governor Meyer	Yes
President Moskow	Yes
Governor Rivlin	Yes
President Stern	Yes

CHAIRMAN GREENSPAN. Thank you. Our next meeting, as you all know, is on Tuesday, March 30.

MR. GRAMLICH. I have just one question on something Don Kohn said earlier. Next meeting we will be under the new regime where if some significant change in the Committee's consensus develops, in the sense that we talked about at the last meeting, we would announce that in the afternoon. Is that right?

MR. KOHN. If it involves a significant shift in the Committee's consensus, that would have to be considered. Yes, the new regime would be in effect.

SPEAKER(?). But we are not required to say anything?

MR. KOHN. We are not required.

MR. GRAMLICH. But the regime is in effect?

MR. KOHN. The regime is in effect.

MR. PRELL. Just as another minor housekeeping matter: Could everyone let me know whether or not they want to change their individual forecasts? That way, even if there is no change, I will know that we haven't missed anyone. That would be helpful.

END OF MEETING