Meeting of the Federal Open Market Committee
February 3-4, 1998

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 3, 1998, at 2:30 p.m. and continued on Wednesday, February 4, 1998, at 9:00 a.m.

PRESENT: Mr. Greenspan, Chairman
Mr. McDonough, Vice Chairman
Mr. Ferguson
Mr. Gramlich
Mr. Hoenig
Mr. Jordan
Mr. Kelley
Mr. Meyer
Ms. Minehan
Ms. Phillips
Ms. Rivlin

Messrs. Boehne, McTeer, Moskow, and Stern, Alternate Members of the Federal Open Market Committee

Messrs. Broaddus, Guynn, and Parry, Presidents of the Federal Reserve Banks of Richmond, Atlanta, and San Francisco, respectively

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

Ms. Browne, Messrs. Cecchetti, Dewald, Hakkio, Lindsey, Promisel, Simpson, Sniderman, and Stockton, Associate Economists

Mr. Fisher, Manager, System Open Market Account

Mr. Ettin, Deputy Director, Division of Research and Statistics, Board of Governors
Mr. Slifman, Associate Director, Division of Research and Statistics, Board of Governors
Messrs. Alexander, Hooper, and Ms. Johnson, Associate Directors, Division of International Finance, Board of Governors
Mr. Reinhart, Assistant Director, Division of Monetary Affairs, Board of Governors
Messrs. Brayton 1/ and Rosine 1/, Senior Economists, Division of Research and Statistics Board of Governors
Ms. Garrett and Mr. Nelson 1/, Economists, Division of Monetary Affairs, Board of Governors
Ms. Low, Open Market Secretariat Assistant, Division of Monetary Affairs, Board of Governors

Mr. Rives, First Vice President, Federal Reserve Bank of St. Louis

Messrs. Beebe, Eisenbeis, Hunter, Ms. Krieger, Messrs. Lang, Rolnick and Rosenblum, Senior Vice Presidents, Federal Reserve Banks of San Francisco, Atlanta, Chicago, New York, Philadelphia, Minneapolis, and Dallas, respectively

Mr. Hetzel, Vice President, Federal Reserve Bank of Richmond

1/ Attended portion of meeting relating to the Committee's review of the economic outlook and establishment of its monetary and debt ranges for 1998.

Transcript of Federal Open Market Committee Meeting of
February 3-4, 1998

February 3, 1998--Afternoon Session

CHAIRMAN GREENSPAN. Good afternoon, everyone. I would like to begin as we always do at the first meeting of the year by turning the floor over to the Board's senior member, Governor Rivlin.

MS. RIVLIN. Thank you. This is the election you all have been eagerly waiting for! The floor is open for nominations for Chairman of the Federal Open Market Committee. Is there a nomination? [Laughter]

MS. PHILLIPS. I nominate Alan Greenspan.

MS. RIVLIN. Alan Greenspan. That is a good idea.

MR. MCDONOUGH. I will second that.

MS. RIVLIN. Are there any further nominations? All in favor say "aye."

SEVERAL. "Aye."

MS. RIVLIN. Now the floor is open for nominations for the Vice Chair of the Federal Open Market Committee. Are there any nominations?

MR. KELLEY. After long and careful consideration, I nominate President McDonough.

CHAIRMAN GREENSPAN. With even longer consideration, I second the nomination.

MS. RIVLIN. Are there any further nominations? All in favor signal "aye."

SEVERAL. "Aye."

MS. RIVLIN. The deed is done.

CHAIRMAN GREENSPAN. We now turn to Mr. Bernard to give us a list of the officers who are on the slate.

MR. BERNARD.

Secretary and Economist, Donald Kohn
Deputy Secretary, Normand Bernard
Assistant Secretaries, Joseph Coyne and Gary Gillum
General Counsel, Virgil Mattingly
Deputy General Counsel, Thomas Baxter
Economists, Michael Prell and Edwin Truman

Associate Economists from the Board:
David Lindsey;
Larry Promisel;
Thomas Simpson; and
David Stockton.

Associate Economists from the Federal Reserve Banks:
Lynn Browne, proposed by President Minehan;
Stephen Cecchetti, proposed by President McDonough;
William Dewald, proposed by First Vice President Rives;
Craig Hakkio, proposed by President Hoenig; and
Mark Sniderman, proposed by President Jordan

CHAIRMAN GREENSPAN. If there are no objections to that slate, I will assume that it has been appropriately voted upon. The next item on the agenda is the selection of a Federal Reserve Bank to execute transactions of the System Open Market Account. Would somebody like to make a suggestion in that regard?

MS. MINEHAN. Mr. Chairman, I would like to recommend the Federal Reserve Bank of New York to assume that responsibility.

CHAIRMAN GREENSPAN. Without objection, I will assume that it has been appropriately voted upon. The incumbent Manager of the System Open Market Account is Peter Fisher. Would somebody wish to renominate him?

VICE CHAIRMAN MCDONOUGH. I renominate Peter Fisher.

CHAIRMAN GREENSPAN. If there are any other nominations, Peter may object, but that is probably irrelevant! I assume there are none. Would somebody like to second that nomination?

SPEAKER(?). I second it.

CHAIRMAN GREENSPAN. Without objection. Now that he is officially ensconced, we can go back to work. Peter, you are on.

MR. FISHER. All right, Mr. Chairman. I sent a memorandum to the Committee suggesting two modest changes to the Authorization for Domestic Open Market Operations. I think that is the next item. One is a permanent increase in the intermeeting leeway from $8 billion to $12 billion. The other is to remove from the Authorization the references to bankers acceptances that have been inoperative lo these many years. I think the memorandum speaks for itself. I would be happy to answer any questions.

CHAIRMAN GREENSPAN. If there are no questions, would somebody like to move amend the Authorization as proposed?

VICE CHAIRMAN MCDONOUGH. Move approval of the Authorization with the modifications proposed in Mr. Fisher's memo.

SPEAKER(?). Second.

CHAIRMAN GREENSPAN. Without objection. Mr. Truman.

MR. TRUMAN. I sent a memorandum to the Committee containing the current versions of the Foreign Currency Authorization, the Foreign Currency Directive, and the Procedural Instructions. No amendments are recommended. The memorandum includes a review of the warehousing authority, also with no proposed amendment of the current arrangement of $5 billion. I will answer any questions.

CHAIRMAN GREENSPAN. Questions for Ted?

VICE CHAIRMAN MCDONOUGH. Move approval, Mr. Chairman.

CHAIRMAN GREENSPAN. Is there a second?

MR. KELLEY. Second.

CHAIRMAN GREENSPAN. Without objection.

MR. JORDAN. I do want to dissent on that.

CHAIRMAN GREENSPAN. It is on record.

MR. JORDAN. Thank you.

CHAIRMAN GREENSPAN. Any other dissents? [Secretary's note: No other dissents were heard.] May I have a motion to approve the minutes?

VICE CHAIRMAN MCDONOUGH. Move approval.

CHAIRMAN GREENSPAN. Without objection. Peter, you are on again for your report on Desk operations.

MR. FISHER. Thank you, Mr. Chairman. I will be referring to the three pages of color charts that were placed in front of you before the meeting started. 1/

The first page updates the charts I have shown before on current and forward three-month deposit rates. In this case, I am presenting a full 13 months of data so you can see recent developments in the context of a longer period of time. If you look at the top panel, shown in red, you can see the abrupt downward shift in U.S. forward rates that occurred right after the New Year. I think it is interesting that not much else has happened other than an abrupt move down. The forward rates do not show much of a rising rate environment or falling rate expectations. They are flat and right on top of one another after their downward shift, which I will come back to in a minute. The flattening of the forward deposit rate curves really began in late October when the Dow lost 554 points. It is quite dramatic how flat

1/ Copies of the charts used by Mr. Fisher are appended to the transcript. (Appendix 1) the forward curves of expected three-month rates have become for the United States.

Looking at the middle panel for Germany, shown in blue, you can see the continued modest decline in German forward rates. I think this continues to reflect three factors. First, there is a widening consensus that when the European central bank comes into existence 12 months from now, the initial policy rate is likely to be in the mid to low 3 percent range, and that is down from market expectations of higher rates. I think there has been a widening appreciation that the Asian crisis will have a greater impact in Europe than the Europeans initially thought, and that has begun to weigh on the outlook for economic activity in Europe. I believe those two developments combine to create a third factor in that the market really sees very little risk of a pickup in activity in the German economy or the European economy more generally in the months ahead, so rates have been winding down in Europe.

In the green bottom panel, you can see at the lower right that there has been some rise in forward rate expectations in Japan as we have moved into the New Year, but the curve is still very flat. I find it interesting that the forward rates have backed up a little, but the rise is not close to being as dramatic as the movements in the Nikkei and the yen in reaction to what the markets have seen as a very aggressive move by the Ministry of Finance to try to stabilize the financial sector and undertake some stimulus in the economy. I think it is noteworthy that the forward rates depicted here are nowhere near the levels that they reached last May when there last was something of a burst of optimism, in the Japanese context at least, regarding the possibility that the tax impact that came in with this fiscal year might not be as bad as feared, and there were some hopes the Japanese economy might start recovering. The point here is that we are not even near those levels even if there is some modest uptick in the Japanese forward rates.

Turning to the second page, I would like to delve into the question of how to interpret recent movements in the U.S. Treasury yield curve. In the top panel, you can see 30-, 10-, and 2-year Treasury yields in green and the implied fed funds effective rate in red from the April fed funds futures contracts as they traded in December and January. I would like to step back and give a little background. In December, as yields and the yield curve were pressing lower, there were a number of market participants, myself included, who thought that with the start of the new year we would begin to see a modest backup in yields. The backup was not expected to be dramatic, but it was thought that yields would rise at least to the levels that existed in early December. This would occur as a consequence of the unwinding of a year-end flight to quality when investors were rushing out of emerging markets and into U.S. Treasuries. The thought was this would begin to unwind itself during January. In particular, the managers of a number of major mortgage-backed securities portfolios took that view. They may have gone home for the New Year holiday somewhat short of their normal duration targets with the idea that they would be able to catch up more easily in the gently rising yield environment they expected to see in January.

At the start of the year, there were three surprises for the market that came very quickly and changed that outlook rather dramatically. One was a shift in expectations for monetary policy. The second was a rather sudden jump in demand for Treasuries and other securities stemming from the Asian crisis, some actual and some anticipated demand. The third was confirmation of a changed outlook in the supply of Treasury securities. Let me go over each of those.

The first came as a result of the Chairman's speech, and its market effect is depicted in the area of the chart associated with the line marked "January 3." The Chairman discussed the problems of price measurement in a low inflation environment, and over that weekend the market interpreted his comments to mean that the Committee and the Federal Reserve had moved to a symmetric outlook on the risks for policy. Later that week, after Governor Meyer's speech on January 8, which included a discussion of easing, the market jumped on that part of the speech and interpreted it as meaning that the Committee probably had a slight bias toward an easing move or, if you will, that the greater probability was now in the direction of an easing in policy. I am not passing judgment on whether either of these interpretations represented a fair reading of the texts, but that is the way the market interpreted them. So, by the end of that first week in January, there was a quite significant shift in expectations for the stance of monetary policy.

Two other things happened that week. One, at the beginning of January there was a further sharp depreciation of a number of East Asian currencies as business corporations in those countries rushed into the markets to try to hedge their exposures for the new year. It was a rather ham-handed, inexperienced effort to hedge their dollar exposures. They had avoided the thin markets in December in the expectation of jumping into the thick markets of January, but they found that they were causing the currencies to move rapidly away from them. That gave a further boost to the dollar and a further anticipation of very strong demand coming into the Treasury market.

The third factor, not to be overlooked, is that on Monday, January 5, the White House announced its expectation that the fiscal budget for 1999 would be in balance. While the market knew developments were moving in that direction, that news hit the market the same day that it had its first opportunity to respond to the Chairman's speech over that weekend.

All of these developments taken together, which may have caught some of the major players slightly short of their duration targets, led to something of a rush. You can see in the top panel of Chart 2 that in the first week in January both the 2-year and the 10-year rates moved down through the fed funds target rate level depicted by the solid black horizontal line. I think the challenge is how to weigh or untangle the three different factors: the shift in expectations, the supply, and the demand factors influencing the market.

In the middle panel on the left, the implied yields in fed funds futures are depicted from now through August. The implied fed funds rate curves are shown for December 16, the date of the Committee's last meeting, for January 9, the end of that first heady week of January, and for last Friday, January 30, when rates backed up a little. In the right panel is a snapshot of the Treasury yield curve for the same three dates. As I look at the fed funds rate curves in the panel on the left, I see that the market is pricing some probability but not the certainty of an easing action. It is not a particularly strong expectation that policy will be eased any time in the next six months, but clearly that is the direction where the probabilities lie.

With regard to the Treasury yield curves shown in the middle panel on the right, many market participants look at the fact that the 2-year note is now trading significantly below the funds rate and take that as a very strong sign or conviction that an easing move is near at hand. Indeed, over the last decade each time that the 2-year note has traded definitively through the funds rate, there has been an easing in policy within the following three months. So, there is some historical background for that view. But I believe it is important to keep in mind when we try to interpret the yield curve that the fed funds futures contracts and the forward rates suggest only some probability of an easing in policy rather than a certainty. When I look at the yield curve, I see a strong conviction that there will be no tightening within the next six months, and I think that conviction is permitting the rather novel set of demand and supply conditions to migrate into the intermediate sector of the curve and thereby promote greater confidence among investors that they can carry 2- and 5-year paper without the risk of a backup in rates induced by the Committee.

I would note two things. First, the entire bill curve, even in the 1-year sector, was already below the federal funds rate at the time of the Committee's last meeting. Moreover, while the entire yield curve--from 3 months to 30 years or 3 months to 10 years depending on how you slice it-- has declined a bit over the intermeeting period, the coupon curve from 2 to 30 years actually steepened over the same even as it shifted slightly lower. So, while there clearly has been a shift in policy expectations in the market, I for one do not think it is as pronounced as a straight reading of the intermediate sector of the yield curve might lead one to conclude.

In the bottom panel of page 2, you can see the movements in the dollar and get a sense of the run-up in the dollar that occurred at the end of last year and the first few days of this year. Clearly, the yen strengthened over the course of January as the Ministry of Finance worked very hard to communicate their intent to stabilize the financial sector of the Japanese economy. I would note that the dollar/mark is very little changed over the period from the high levels it reached at the end of the year.

Turning to the last page of charts, I will briefly discuss our open market operations during the period. I would like to make just a few points. First, in the first maintenance period shown on the left side of the upper panel, we had both pronounced softness in the market around the Christmas holiday and then the year-end pressures; so, we had a ying-yang maintenance period. We tried to manage both that softness and then the firmness. In the next maintenance period, which ended January 14, we began the period by adding reserves, but we subsequently had repeated days of fog-induced float that led to a certain sogginess in the market. So, we ended up being on the other side of the market, draining reserves that resulted from a considerable rise in float. Early in the third period, on January 16, the unexpected size of corporate tax payments led to a miss of just under $3 billion in our projection of the Treasury balance. That contributed to a very high fed funds rate, which rose as high as 20 percent on that day, and there was some borrowing from the discount window. So, January 16 was one of the difficult days we faced during this period. I would note that in the current period just under way, which is not depicted here, we again were supplying reserves in the last few days in anticipation of the settlement on new Treasury securities yesterday. Today, we have been draining reserves. We knew we would in fact have this heightened demand yesterday, but we anticipated soggy conditions as we came to the end of the period.

I would also like to mention something not depicted in these charts to make sure the Committee members are all aware of the transactions in question. Just before Christmas, we confronted an order from the Japanese authorities to sell in Treasury bills. In the absence of

We took of bills into the SOMA account, selecting bills that we would be able to run off in the course of January so as not to make our need to drain reserves any worse at the end of the month. We sold for them in the market and took another out of the repo pool, where we have had an elevated cash balance for them, to help them in effect to meet their cash needs. We also actually arranged a transaction between the Bank of Japan and the Ministry of Finance during the period; one wanted to sell bills and the other to buy. This transaction was associated with their very heavy intervention in late January, and we tried to organize the financing this way to minimize the impact on the bill market. At the same time, my colleagues at the Bank of Japan were faced with the problem of how to sterilize the intervention on the other side and get enough yen back into their market to avoid a spike in rates. I just wanted to inform the Committee of these transactions.

We had no foreign exchange operations for the System during the intermeeting period. I will need the ratification of our domestic operations, and I would be happy to answer any questions.

CHAIRMAN GREENSPAN. You raised an issue that I frankly have not thought about in a long time when you referred to fog-induced float. I remember years ago that this was a relatively usual occurrence. That is, weather-related transportation difficulties caused float to fluctuate sharply. What has been the experience in recent years?

MR. FISHER. In the last several years, I do not recall that many instances of sharp variations in float.

CHAIRMAN GREENSPAN. Is it technology that is stabilizing float? What is happening?

MR. FISHER. Sandy Krieger says the weather has been better! [Laughter] Sharp, unanticipated fluctuations in float now tend to happen only with extreme weather. The blizzards we had a couple years ago that closed the city of New York created some extraordinary float around the time of the holidays. The improvement we have seen may have been the result of technology and a better working check clearing process, but I do not have any particular insights beyond that. My sense over the last six months to a year, however, is that we are seeing a little more variation in float, and as operating balances get lower and lower, a given miss on float proportionately matters a lot more.

CHAIRMAN GREENSPAN. Governor Rivlin says it is El Niño. [Laughter]

MS. MINEHAN. The improvement is due to a lot of effort on the part of many people all around the Federal Reserve System. They have been dedicated to reducing float from a level that used to run in the range of $2 to $3 billion a day and is now below $100 million on most days.

MR. MCTEER. In other words, we have float down too far to float!

MS. MINEHAN. Right! First of all, we have made an enormous number of changes in the way we transport checks and other payment instruments and in the timeliness with which we do it. We have been very careful about the time frames in which we both give credit and transport items from one place to another. If you compare what we do currently to 1982, we now deliver twice as many checks in a single day to locations across the country as we did in 1982.

CHAIRMAN GREENSPAN. Don't smile, Peter, the next thing that will come is a slip of paper that says your salary has been reduced.

MR. FISHER. That is deflation! [Laughter]

CHAIRMAN GREENSPAN. Peter, one; the Chairman, zero. [Laughter] Any further questions?

MR. BROADDUS. Peter, we took a fairly sizable loss on our foreign exchange holdings last year. I know it was unrealized and I know that in some years we make a profit on these holdings. As I understand it, the unrealized loss or profit does affect the amount that we return to the Treasury in any particular year. This may be a dumb question, but is it at all feasible to consider hedging our exposure in some way?

MR. FISHER. One could consider hedging it, but I think the policy inference of how we choose to hedge and how much we hedge would be rather awkward.

MR. TRUMAN. The act of hedging would be an act of intervention.

MR. BROADDUS. We don't want to do that! [Laughter]

MR. TRUMAN. Once you hold the foreign exchange, you intervene when you hedge it. It is as if you had reversed the intervention that occurred when you purchased the foreign exchange to begin with. Hedging is an alternative to intervention, and it has been considered on occasion. A similar question is whether we could do all the intervention in the forward market or the nondeliverable forward market. I don't think the Manager would recommend that.

MR. FISHER. Not yet! If I may, President Broaddus, you mentioned unrealized losses or profits. We pass our net profits on continuously to the Treasury. They go through the P&L system and on to the Treasury throughout the year.

MR. TRUMAN. I think that is a very important point. Although our unrealized profits or losses get announced once in the summary report for the year and therefore that is a big number, I think the policy that we have followed for some time now is to forward our net earnings to the Treasury every week, if I am not mistaken.

MR. PARRY. That is a new policy?

MR. TRUMAN. No, it has been in existence for some years. The fact that we make payments to the Treasury periodically through the year does reduce the political dimension of this. In some foreign countries such as Germany, the central bank makes a payment once a year and the size and timing in and of itself is a political event. Leaving aside the comments that you made, which are perfectly reasonable, the fact that it is done routinely in bits and pieces as the foreign exchange value of the dollar rises and falls means that we essentially cushion it in terms of the political impact. Perhaps to further lower the impact we should not report it only in the annual statement.

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

CHAIRMAN GREENSPAN. Hold on. Some of your colleagues may have more questions.

VICE CHAIRMAN MCDONOUGH. I was looking around and didn't see any.

[Laughter]

CHAIRMAN GREENSPAN. I will presume you are correct. Is there a second?

SPEAKER(?). I will second it.

CHAIRMAN GREENSPAN. Without objection. We now move on to the Chart Show with Mike Prell and Karen Johnson.

MR. PRELL. Thank you, Mr. Chairman. We will be referring to the charts in this colorful handout in front of you. 2/

Chart 1 summarizes the staff forecast. I should note that here, as in the other exhibits, we have used the Greenbook numbers for GDP-related variables rather than those in the BEA's advance release. We have done this partly for mechanical reasons but also with the thought that the differences are for the most part small and mainly matters of forecasting missing source data. Time will tell whose estimate is closer to the mark--though it makes me a bit uneasy knowing that they are the umpire as well as a contestant in this guessing game.

In any event, on either set of numbers, we would be predicting a sharp deceleration of activity this year. As indicated in the top panels, we are predicting that real GDP growth will slow to about 1¾ percent this year and pick up to just 2 percent next year. We expect the growth of private domestic final demand, the red line on this chart, to fall off but not so sharply; in fact, we are expecting an advance of almost 4 percent this year. The story behind the near-term drop-off in overall GDP growth is inventories and the external sector, as we will be discussing shortly.

The projected growth of output is slower than potential, and thus we anticipate an easing of pressures on resources. The middle panels show that the unemployment rate is predicted to rise to 5¼ percent by late 1999, while the factory utilization rate is expected to drop to 78½ percent.

This continues the recent pattern of disparate messages from the two utilization measures, with the jobless rate remaining so low that we would normally expect inflation to pick up by a few tenths of a percent per year, while the capacity utilization rate is below par historically and seemingly pointing to further disinflation. The forecast in the bottom panels essentially splits the

2/ Copies of the charts used by Mr. Prell and Ms. Johnson are appended to the transcript. (Appendix 2) difference, while also taking account of the other elements in the inflation picture. The core CPI inflation rate edges off slightly through 1999, while the overall index slows further this year and then accelerates discernibly next year. At least, that is what we foresee for the published data, a distinction I will return to later.

Meanwhile, Chart 2 outlines the key financial and fiscal features in the outlook. First, our basic monetary policy assumption is that the fed funds rate will remain near the present 5½ percent level. As you can see in the upper left graph, the real funds rate has been rising in recent quarters owing to the quarter-point snugging last March and a decline in inflation expectations--proxied here alternatively by lagging one-year PCE inflation and the Michigan SRC survey median. We anticipate that this real rate will remain at a relatively elevated level over the forecast period.

We also expect that long-term rates will stay pretty much in the range of recent weeks. This implies the persistence of an unusually flat yield curve, as depicted in the upper right panel. Historically, so narrow a spread between long and short rates would appear to point to very weak GDP growth. However, this narrowing has occurred in an unusual way. Most commonly in the past, the narrowing of the spread occurred with Fed tightenings causing short rates to rise more than long rates. In this instance, though, policy action has been a minor factor, and the long rate has been influenced by, among other things, a flight to safety, diminished inflation expectations, and the prospect of federal surpluses. One thing is clear, though: whereas a year or so ago the markets evidently thought the Fed would have to tighten to keep inflation from rising, that is no longer the case. What to take from that observation is not entirely clear, but I would offer the speculation that it is not so much a reflection of a view that the economy is going to weaken drastically as it is an indication of the belief that favorable supply conditions-- including strong productivity gains and the availability of cheap imports--will be restraining price increases as the economy expands moderately.

The ability of the stock market to achieve new highs in the face of the recent Asian storms would seem to support this upbeat interpretation of the yield curve developments. But, we believe that the market will decline about 10 percent from yesterday's record level by the end of this year. The key reason is the divergence between our forecast of profits and those apparently prevailing in the market today. The red line in the lower left panel of Chart 2 shows that stock market strategists--the so-called "top-down" analysts--are expecting S&P 500 earnings per share to grow roughly 6½ percent this year and 5½ next. The "bottom-up" summation of individual-company security analysts' views, not plotted here, is still well into double digits. The black line shows our forecast of a NIPA item that has tracked the S&P earnings relatively closely in recent years; as you can see, we are more pessimistic about the outlook. It is obvious to which drummer the market has been marching in the past few days; and there is a clear danger that this rally will provide additional stimulus to aggregate demand. The Greenbook provided a simulation of a more buoyant stock market for those of you skeptical of our predictive powers, which I assume is many of you at this point.

Finally, on the fiscal side, we have assumed that there will be no significant net changes in policy in the near term. The unified budget is projected to be in approximate balance in fiscal 1998 and 1999.

As I suggested earlier, a good deal of the action in our forecast has its roots in the external sector, so let me turn now to Karen, who will discuss that part of the outlook.

MS. JOHNSON. Financial market turbulence in Asia has dominated events abroad over the past six months. We have attempted to foresee how these events will influence prices, global trade, and thus output growth both here and abroad during this year and next. Despite our best efforts, uncertainty about exactly how these variables are linked and about how the key financial variables will behave in the near term is a major source of risk to our forecast.

Your first international chart reports interest rate changes and developments in exchange markets, along with our forecasts for selected dollar exchange rates. The top left panel shows the change in the value of the dollar in terms of the yen and the mark since mid-1997. We believe that the relative strength of economic activity in the United States accounted for much of the rise in the value of the dollar over the year. Dollar assets also provided some security in a turbulent world. With U.S. output growth expected to slow, and given our assumption that the crises in Asia will not give rise to additional major surprises in that region or elsewhere, we look for the dollar to remain near recent levels in terms of these currencies. In terms of the Canadian dollar, on the right panel, we look for the U.S. dollar to retreat a bit from recent all-time highs. We expect the dollar to rise slightly in terms of sterling, which has been particularly strong recently.

As is shown in the next row of panels, three-month interest rates have moved up since July in foreign industrial countries, particularly in Canada and the United Kingdom, where official central bank lending rates have been increased. Ten-year rates have generally fallen, however. On balance, long-term rates have moved down less in Germany and Japan than in the United States, perhaps reflecting capital flowing into U.S. instruments in search of safe-haven opportunities.

The next panels show a range of selected Asian currencies, expressed as the U.S. dollar value of those currencies. In nominal terms, the Hong Kong dollar has to date successfully maintained its peg to the U.S. dollar, and we project that will continue. The Korean won and the Thai baht have lost about one half of their market value at the start of 1997. The drop for the Indonesian rupiah is even larger. There undoubtedly will be more volatility in these nominal exchange rates. But, as shown on the right, on balance over the forecast period we expect that rising domestic inflation will impart an upward trend to the real exchange rates of the heavily depreciated Asian currencies. For the Mexican peso, bottom left, slowing domestic inflation and some nominal depreciation should prevent further real appreciation.

A broad measure of the exchange value of the dollar in terms of 29 currencies --weighted to reflect the competitiveness of U.S. exports and adjusted for relative consumer prices--is shown in the bottom right panel. Taken together, our projections for dollar exchange rates imply that, for this measure of the dollar, the extended real appreciation that began in early 1995 will give way to some modest real depreciation of the dollar.

Your next chart translates our outlook for exchange rates and foreign prices into prospects for U.S. import prices. The top left panel presents what evidence we have of the effect to date on U.S. import prices of the events in Asia. Prices of imports from the Asian NIEs and from Japan continued to fall rapidly through the fourth quarter, in contrast to prices of imports from other industrial countries.

The right panel shows some results of our efforts to use models to calculate the contribution of foreign consumer prices and exchange rates to average U.S. import prices. Our research shows that it is useful to separate prices in the foreign industrial countries--translated into dollars using nominal exchange rates (the black line)--from prices in the nonindustrial countries, also expressed in dollars (the red line). The very sharp declines in the exchange rates of many countries in the latter group result in the much steeper drop during 1997 that is evident in the red line. In addition, in our analysis of import prices, we need to allow for impulses from non-oil commodity prices (in the middle left panel) and oil prices (the middle right panel). Non-oil commodity prices are expected to continue their downward trend throughout the forecast period as supplies of these commodities generally remain ample and as economic distress in Asia weakens global demand. Oil prices have already decreased significantly and are expected to edge down a bit further before partly retracing their decline. The present softness in oil markets reflects additional oil supply from some Persian Gulf producers and mild winter weather in several regions that has depressed demand.

The bottom panel reports results of our efforts to take account of these factors in forecasting the prices of core imports--that is, imports of non-oil goods other than computers and semiconductors, shown by the black line--and prices of total imports of goods and services, the red line. The solid black bars show the model's calculation of the contribution of prices in foreign industrial countries to the forecast for core import prices; the open black bars do the same for prices of the nonindustrial countries. Our analysis suggests that the extreme depreciations in some Asian currencies were an important influence in the decline of import prices late in 1997 and will continue so in early 1998. However, our estimates suggest that the effect of a given percentage change in dollar prices in the nonindustrial countries on U.S. import prices is about one third of the effect of the same change in prices in foreign industrial countries. Thus, the disinflationary impact of price developments in Asia on U.S. import prices is limited. Prices from both groups of countries are projected to switch to exerting slight upward pressure later this year.

Our outlook for output abroad, the subject of your next chart, incorporates our judgment about the implications of financial developments in Asia for activity in that region and our estimate of the spillover effects of those developments onto growth in other regions. Growth abroad, the red bars in the top left panel, is estimated to have dropped sharply in the fourth quarter and is projected to remain weak this year before recovering partially next year. As can be seen in the top right panel, swings in projected growth in the Asian developing countries account for the lion's share of the fall in average growth abroad. Growth in the Latin American developing countries and in the industrial countries is expected to be weaker this year and next than in 1997, in part the result of spillovers from events in Asia.

As reported in the middle left panel, the Asian developing countries account for nearly 20 percent of U.S. exports. Our reading of developments to date is that output growth in Korea and in several southeast Asian countries will be pushed into negative numbers as domestic demand is severely reduced by the financial market turmoil, higher domestic interest rates, restricted availability of credit, and macroeconomic policy measures put in place in these countries. We look for recovery to begin in 1999 in response to strong external demand and success on balance in implementing the structural reforms now under way. In "greater China," some asset market disruption and loss of export competitiveness as a consequence of currency depreciations by neighbors is expected to weaken growth this year and to restrain the rebound next year.

This forecast incorporates the substantial improvement in external balances in Asia that we believe global financial markets are demanding. The bottom left panel compares our forecast for the aggregate current account balances of the Asian region in the current Greenbook (the black bars) with that prepared in September (the red bars) when it appeared that adjustment would be limited to one or two smaller Asian countries. We now estimate that the aggregate Asian external balance for 1997 already has adjusted significantly. Substantial further adjustment is expected to be accomplished quickly during this year; the emergence of sizable surpluses should reassure markets, thereby easing credit availability and permitting moderation of some policy measures. Growth in domestic demand should then resume. You can see in the right panel for the Latin American countries that only a small positive revision has been made to our forecast since September. This aggregate masks substantial changes since September in our forecasts for individual countries. Nevertheless, we are assuming that these countries will not experience the kind of financial crises that would force substantial external adjustment.

Chart 6 contains our forecast for the industrial countries and some of the factors that lie behind it. Real GDP growth in most of these countries, the top left box, is expected to slow this year, in part as a consequence of weaker export demand from Asia. In Japan, large direct effects of downturns in the troubled Asian countries came on top of domestic factors that weakened domestic demand and the result was little growth on balance last year. We expect only limited recovery during the forecast period as the move from fiscal contraction to a more neutral stance yields a bounceback in domestic demand that is partially offset by weakness in the external sector. The panel on the right shows measures of the yen and the mark calculated as weighted averages based on their exports and adjusted for relative consumer prices. These measures suggest that, in effective terms, these currencies appreciated in 1997--with the yen moving further over the year as a whole. This effective appreciation should act as a drag on the external sector for much of the forecast period. Our exchange rate projections imply some real effective depreciation this year and next, especially for the yen, that should help to boost the Japanese and German economies in 1999.

The extent to which the other industrial countries are vulnerable to spillover effects from Asia is suggested by the data in the middle panel. While Japan exports a fraction of its GDP similar to that for the United States, a far larger share of its exports has been to the Asian developing countries. The European Union members, when taken together so that intra-EU trade is excluded, closely resemble the United States.

The bottom panels show the available information on business confidence. The downturns evident for the Canadian, U.K., and Japanese measures in the second half of 1997 likely are at least in part a response to the Asian crises. In the European countries shown on the right panel, business confidence leveled off in late 1997. In France, where we have a reading from January, confidence remained at a high level but there were some reports of lower foreign orders, perhaps a hint of Asian effects to come.

The final international chart presents our conclusions about the path of real net exports over the forecast period. The black line in the upper left panel, projected growth of core imports--the volume of non-oil goods excluding computers and semiconductors --is shown slowing on a four-quarter change basis through the end of 1999. Our models decompose the contributions of U.S. GDP (the black bars) and relative prices (the red bars). Through part of 1998, the stimulative effect of the recent dollar appreciation increasingly boosts import demand, partly offsetting the restraining effect of slower U.S. GDP growth. From mid-1998 through mid-1999 both variables are working to decelerate core imports.

In the upper right panel, projected growth of real core exports--the line--drops sharply, starting now. Relative prices are working to cause exports to decline throughout the forecast period. The robust contribution of foreign growth to our export performance that occurred in 1997 is projected to be followed by significantly diminished contributions this year and next.

Growth of total exports and imports is depicted in the lower left panel. As you can see, the slowing that we expect in export growth--the black line--greatly exceeds that projected for imports--the red line--a consequence of the real dollar appreciation that we have seen. In addition, we have not extrapolated into the forecast period the surprising strength in real export growth that occurred in the first half of 1997--the part not explained by the bars in the upper right panel. With real imports growing significantly faster than exports throughout the forecast period, the contribution of real net exports is negative. As the data in the box show, real net exports likely will subtract nearly one percentage point from real GDP growth this year and about half that in 1999.

Mike will now continue our presentation.

MR. PRELL. The next two charts focus on the dynamics of private demand in the forecast. First, in Chart 8, the upper left panel shows real PCE growth holding at a high rate for a while longer and then dropping off to 2 percent in 1999. All signs look positive for consumer spending in the short run, among them the historically high level of sentiment portrayed at the right. Surely, one of the factors accounting for these favorable attitudes is the run-up in stock market wealth.

As I noted earlier, we are expecting the market to give back a small share of its gain, causing the wealth-income ratio to fall off--as shown by the black line in the middle left panel. The experience of the past year has reinforced our belief in the significance of the wealth effect on consumption; thus, we are predicting that the personal saving rate will drop further over the next few quarters in lagged response to last year's market advance and then level out in 1999.

An added attraction in the story of strong consumer demand is the current wave of mortgage refinancing. The run-up in the MBA refinancing applications series, plotted at the right, probably exaggerates the relative dimension of the interest savings that will be realized by households in this episode, but there should be enough to give a small lift to spending. The decline in mortgage rates obviously has made home purchase more affordable. As documented at the lower left, our usual measure of the cash flow burden of ownership shows that, by this criterion, now is the best time in decades for the average family to buy a house. In our forecast, this remains so, and--with little supply of unsold new units overhanging the market--we see single-family housing starts holding up well through next year, despite the slowing of job growth. A very close inspection of the right panel, perhaps requiring a magnifying glass, shows that multifamily starts--the reddish upper layer--spurted in the fourth quarter of 1997. We do not expect that higher level to be sustained--although there may be some upside risk here, given the generous availability of financing for developers. The bottom line is that residential investment, which rose substantially in 1997, is likely to flatten out soon and then edge lower.

Softening export and consumer demand will tend to cause businesses to trim their capital spending programs over the coming months--the so-called accelerator effects. The upper left panel of Chart 9 shows that through some large quarterly gyrations indicated by the red line, real business fixed investment remained on a strong growth trend last year. We foresee a notable slowing but not a collapse. Indeed, as indicated at the right, we estimate that the level of spending will sustain the recent 3 percent-plus growth of the business capital stock through the next two years.

This is high enough to produce further sizable increases in the amount of capital per worker. Among the forces spurring this capital deepening is the rapid decline in the price of computers, shown in the middle left panel. The combination of further price reductions and increasing power should be enough to keep real computer purchases on a steep growth trajectory.

Orders for nondefense capital goods, ex aircraft, shown at the right, have waffled a bit in recent months, but from what we hear, we do not think this is a major turning point in domestic equipment spending. I might note that, in the near term, this series will have to be read with extra caution when gauging the strength of domestic purchases. International trade is very important in this sector, and by all reports--and perhaps reflected in yesterday's NAPM survey--equipment orders from Asia have begun to weaken. Likewise, at some point, U.S. firms may find some bargains in imported capital goods, although this is likely to be a lesser part of the story and more concentrated in computers.

Another key element in the projected economic deceleration this year is inventories. Nonfarm stocks rose around 5 percent last year, clearly an unsustainable rate. We are expecting a deceleration over the next few quarters to roughly 2 percent. Admittedly, we have been telling this story for some time. Perhaps, however, the risk of another upside surprise has been diminished by the rise of the stock-sales ratio that you can see in the right panel. In retrospect, it looks like firms found themselves with leaner-than-desired inventories at the end of last year and have been restocking--with the added ingredient of the Boeing production ramp-up. Of course, with no broad overhang of unwanted stocks at this point, any upside surprise in final demand relative to our forecast could again be reinforced by an inventory response.

Let me turn now to the question of the implications of the projected growth for inflationary pressures. Chart 10 shows some key features of our labor market forecast. In the upper panel, you can see that we expect a slowing of labor productivity growth in the near term and then a return to roughly trend growth in 1999. As we noted in the Greenbook, a number of considerations came into play in this forecast, but central is that there will be some lag in the adjustment of hours and employment to the slowing of output growth.

Certainly, at this point there is no sign of a major slackening in hiring. Initial claims and a variety of other indicators suggest that the January and February labor market reports will show still sizable increases in payrolls--albeit not on the scale of those reported for the fourth quarter. But we expect firms to respond before long to the evidence of softening demand, and--as you can see at the middle left--we are looking for monthly payroll increases to drop below 100,000 this spring.

On the other side of the ledger, we do not foresee any significant movements in the labor force participation rate. A reduced growth in job opportunities will tempt fewer people to enter the labor market, balancing off a modest positive effect of welfare reform.

On balance, as I noted earlier this all results in a rise in the unemployment rate, but not to what we would regard as implying the absence of wage pressures. The latest ECI release showed a big jump in compensation in the fourth quarter, which we are discounting heavily in our assessment of ongoing trends. First, we always downplay the quarterly numbers because they are so noisy; but, second, in the present case they seem to have been importantly influenced by a few non-recurrent industry developments and the minimum wage hike. That said, we do believe that the tightness of the labor market gave an underlying lift to the trend of compensation gains last year, especially on the wage side. Our forecast, however, is that wage increases will diminish slightly this year and next, owing to the lagged effects of falling price inflation and inflation expectations. Meanwhile, benefit cost increases are expected to be a little larger, owing primarily to rising health insurance premiums. The net outcome, tabulated at the right, is a slight drop-back in compensation inflation to just over 3 percent by 1999.

If one viewed prices as being determined in the short run by a mark-up over trend unit labor costs, this might suggest a pretty sanguine outlook for price inflation. An alternative view, though, is that the more reliable modeling approach is to link price inflation directly to resource utilization, letting wages and the share of income going to labor be a side show. But, in implementing this latter formulation, one must choose a measure of resource utilization. Traditionally, it has been the unemployment rate, but it is far from clear what really works best.

The upper panels of Chart 11 illustrate this quandary. On the left side is a scatter plot of the unemployment rate versus changes in CPI inflation; on the right is the corresponding plot for the manufacturing capacity utilization rate. As your eye will tell you and the cited R-squares will confirm, there isn't much to choose between the two versions. That is because the jobless rate and the capacity utilization rate generally have moved together. But that has not been so true of late; capacity has been growing very rapidly in manufacturing, and the factory utilization rate has been only a bit above average in the past year while the unemployment rate has fallen to quite a low level by past standards. Reflecting this, the inflation forecasting "error" in 1997, as measured by the vertical distance to the regression line, was smaller for the utilization rate than for the unemployment rate relation.

We do not want to make too much of this observation. First, these clearly are loose relationships historically. And second, we have yet to develop a compelling story for why plant use would systematically be pivotal in the overall inflation process. Under the circumstances, our forecast involves what we hope is a judicious weighting of the signals coming from the two indicators of inflationary pressure. Certainly, at this juncture, despite the tightness of the labor markets, there is no anecdotal support for the notion that prices are about to firm; indeed, in goods markets, prices may well decline in the near term. The competition from cheaper imports obviously is a factor there.

Also pointing to a lower inflation outlook this year than might be suggested by the unemployment rate alone is the likelihood that food prices will increase relatively slowly--the middle left panel--and the favorable consequences of the oil cost developments that Karen described for consumer energy prices--the right panel. In both instances, however, we are looking for some pickup in 1999.

The bottom panel summarizes once again our projection for total and core CPI inflation, the value-added in this version being the addition of the effects of the technical changes in the index made by the BLS since 1994. As you can see, the trend of inflation--as indicated by the total height of the bars--is somewhat less favorable when viewed from this perspective, but the acceleration in prices still is not dramatic. From where we were last year, the pickup by 1999 is only on the order of a quarter percentage point in the core CPI; even measured on a basis consistent with the 1994 figures, core and total CPI inflation would still be less than 3 percent next year. As the Bluebook simulations suggested, a plausible extension of the Greenbook baseline might show inflation trending up still further after 1999, in the absence of some policy action, but perhaps only a moderate one. Under the circumstances, and with all the uncertainties in the outlook, we did not think it unreasonable to stick with a stable funds rate assumption in formulating this projection.

The final exhibit summarizes the forecasts you submitted. You folks generally are predicting stronger growth and higher inflation, but with an unemployment rate similar to ours. It is tempting to enter into some mind-reading about what might lie behind the different behavioral relationship, but I expect that this will become apparent in the discussion. I might also note that in the Humphrey-Hawkins report, the Board is effectively required to comment on the consistency of your forecasts with those of the Administration; their CPI forecast is at the high end of the central tendency range I have constructed for you, while their growth rate is at the low end and their unemployment rate above yours.

I will stop here; we will be happy to answer whatever questions we can.

CHAIRMAN GREENSPAN. Let me say first that as is usually our procedure, we will allow the forecasts that you submitted to Mike Prell to be subject to revision until the close of business on Monday, February 9. Questions?

MR. JORDAN. Mike, I want to ask a question related to your confidence in the consistency of the financial and the real forecasts. I would like to get Peter's reaction from the market's standpoint and from the Desk's as well. Looking at Chart 1, Chart 2, and the Greenbook numbers, let us imagine that six months from now, maybe at the FOMC meeting in August, these projections have been borne out by the data reported for the first two quarters. In that event, we would be looking at real GDP growth of 1 percent for the second quarter and an average rate of inflation, as measured by the CPI, of 1.1 percent for the first half. Bond yields would be about the same or higher than they are today.

MR. PRELL. Let me say that in our forecast we anticipated that a considerable proportion of market participants would be expecting us to ease in that economic environment. So, we actually have long rates coming down from their current levels. We indicated in the Greenbook that they probably would go down to their recent lows and possibly through them. We think the incoming news in the next few months is going to create a much more bullish atmosphere in the intermediate- and long-term sectors of the market.

MR. FISHER. In my presentation, I pointed to the possibility that bullish sentiment is already building in the market. This is one of the anxieties that I have in looking at the market.

MR. JORDAN. Okay.

MR. PRELL. It is not uncommon to find forecasts that indicate a little more strength in the bond market than ours does over coming months. Those forecasts are associated with predictions of 30-year Treasury rates in the area of 5¼ to 5½ percent, and there are those who are looking for a rate of 5 percent in the not too distant future.

MR. JORDAN. The question was really about confidence in the consistency of the two sets of data, the national income and product account numbers and the financial. When I look at the Blue Chip forecast, for instance, it is not clear to me to what extent such a forecast is already built into the current market. If this Greenbook projection is already close to being built into current markets, that is one thing--

MR. PRELL. I think our economic forecast is weaker than most of those in the market. There are people with even weaker forecasts than ours for 1998, but the Blue Chip consensus looks more like your forecasts at this juncture, and it appears to be associated with essentially stable short-term rates.

MR. JORDAN. How much of an error in the Greenbook projections for the next two quarters, the current quarter and spring quarter, would be required before we had a significant backup in market interest rates? To what extent does the market in this sense need to see something close to this kind of projection to hold these levels versus a surprise in the other direction?

MR. PRELL. Peter may have greater insight into this than I, given his proximity to more market participants. I guess my sense is that real growth alone is not going to be the critical variable. I think a more crucial factor will be signs that inflation is picking up in a way that would be perceived as making the Fed very nervous. If this were an environment in which we did not see signs of the Asian shock feeding through, I think that would make markets all the more anxious because developments in Asia are seen right now as balancing out, in the Fed's eyes, the high level of resource utilization and the inflation risk that that entails.

MR. KOHN. I was going to comment that over the last couple of months in particular the markets seem to have had a weaker picture of the outlook for economic growth and inflation than many economists. The markets seem to be building in a softer path for short-term rates, even making the allowances that Peter mentioned, than have most economists. So, it is very hard to tell what would be a disappointment and what would not. The other point, just to reinforce what Mike said, is that expectations relating to the economic outlook seem to have a lot to do with the timing of the Asian effects on the U.S. economy. The question is not whether they will hit shortly but whether the markets will see them coming. The fact that growth in the first half of the year might prove to be a little stronger than expected would not have much effect on markets if market participants had some hints that the Asian effects were yet to come down the road. So, I think we have to look past the first half to see how markets would react.

MR. JORDAN. I was asking the question because headline reports about the Asian situation give one the impression that these economies are even bigger than California's economy, let alone Canada's, which, of course, is not true. All of them taken together are not that large in terms of their aggregate GDP, total trade, or shares of our trade. Yet, one gets the impression from the press reports that a very, very big downdraft effect is about to hit us. If such an effect is built into the marketplace, we could get a significant backup in rates when the markets find out that it is not true.

Let me ask a somewhat related question since you mentioned possible reactions to signs of rising inflation, should they emerge. In one of the panels on Chart 8, Mike, you illustrated the strength of the housing markets by showing multifamily and single-family housing starts, but you did not show house prices. Do you have any implicit or explicit forecast of what you think is going to happen to residential house prices?

MR. PRELL. Yes. But I must say that exactly what has been happening to house prices is a little unclear. By most measures such prices have been rising somewhat faster than the general inflation rate. The rise varies from measure to measure and seemingly month to month, but I think there has been a real increase. We anticipate a further real increase over 1998 and 1999, something in the 3 to 4 percent range for single-family houses.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mike, I have a question about the ECI forecast. I understand your point about the fourth quarter of last year. If we look at the trend of the ECI in your forecast from the second quarter of last year to the first quarter of 1999, it seems unlikely to me that we are going to continue to experience such a favorable trend. First, it seems to me that increases in medical costs are likely to be accelerating, and if that occurs your forecast would imply slower increases in the wage and salary component of the ECI. Secondly, I think that bonuses and commissions, which clearly played a major role in boosting the ECI in the fourth quarter of last year, may continue to play such a role in the current quarter and maybe beyond. That seems likely for real estate commissions in particular. I do not know how the BLS handles the seasonal adjustment of bonuses, which sometimes are paid at the beginning of the year for tax reasons as opposed to the end of the year. I also think that inflation expectations could be a major factor, but how those are actually formulated may be more complex because we anticipate improvement in the core CPI due to technical factors. To the extent that people are looking at what is happening to actual prices, those factors may not be seen. So, I guess I end up thinking that this is one area where I have the greatest uncertainty.

MR. PRELL. I don't know if it is the area in which we have our greatest uncertainty, but I would certainly agree there is uncertainty attending this part of the forecast. It probably is unwise to put too much weight on the quarterly progression of these compensation numbers. We have found them to be extremely erratic and the seasonal adjustment of this series is uncertain. I think the best way to look at these numbers is on some moving average basis. We took a look at them on a four-quarter change basis, and we saw an acceleration over the past four quarters, but it was only on the order of about ¼ percentage point. That included the effects of a considerable boost to the fourth quarter from commissions and bonuses. The surge in the latter was associated with the high level of activity in the real estate and mortgage banking business, and it does not necessarily imply ongoing rapid growth from that high level. We also had a minimum wage increase that probably affected the fourth quarter to some extent on a lagged basis. But when we look at the ECI components by industry and so on, there is no broad, across-the-board acceleration that one can observe. So, I think it is reasonable to take those recent numbers with a grain of salt. They are affected to an important extent by the finance, insurance, and real estate sectors, and they may also be capturing some of what we have been hearing about temp workers and computer people. When we get beyond that, we do not see much going on.

In the first quarter, yes, we expect another slug of bonuses. That is apparently when the majority of the Wall Street firms will be paying them out, so we have them in our numbers. That tends to keep the first-quarter benefits number from dropping back as it might otherwise, given the fourth-quarter bulge. The really big issue going forward, I think, is the inflation expectations story. Now, there are different ways that people model the momentum in compensation. Some look at wages as the momentum variable. If we did that, we would forecast an acceleration. Depending on which compensation variable is selected, it could be a slight acceleration or one that is considerable.

An alternative view is to look at price expectations, and we have models that do that. It is not clear which model works best, but the ones that incorporate price expectations are predicting much slower inflation in compensation than we have written down. If we take the latest Michigan reading as our measure of current inflation expectations, there seems to be some movement of these expectations into closer alignment with the actual inflation rate over the past year. When employers sit down to consider what kind of pay increases they may grant their employees, to the extent that they take the cost of living into consideration they will be looking back at 2 percent inflation, maybe a bit less. Some of our models are using lagged inflation terms that have higher inflation expectations implicit in them. So, we see this as a balancing act. We do not know which is the optimal formulation to use, but we think we have a reasonable projection to work with at this point.

CHAIRMAN GREENSPAN. How significant is the correlation between nominal compensation and productivity?

MR. PRELL. I don't know the answer to that question, but I suspect the correlation is very weak in the short run. In fact, we get some of our largest compensation increases when productivity increases are beginning to fall near the end of a cyclical expansion. But I would not venture a further statement on that.

MR. STOCKTON. One can put nonfarm business productivity into a wage equation and actually see whether or not productivity is an important factor explaining nominal wage gains. The statistical effect turns out to be marginally significant at best. We know that real wage aspirations, loosely based on productivity, ought to be an important factor in conditioning wage demands, but businesses may not be willing to grant the wage increases. To the extent that fluctuations in productivity do not show up in wages, the first round effects will show through to profit margins rather than nominal compensation.

CHAIRMAN GREENSPAN. The reason I raise the question is actually the reverse; it relates to anecdotal indications that when nominal wages are beginning to accelerate, then business escalates its efforts to reduce costs and improve productivity. So, if that model were functioning in a meaningful sense, then a significant rise in nominal wages could very well merely reflect the fact that productivity was rising and therefore unit labor costs were not. But when you try to put that into the equation, you are telling me that you are picking up almost nothing.

MR. PRELL. Some of this has been touched on in the simulations of the effects of a productivity surprise that we have discussed in the past and how it might feed through to wages, profits, and prices in a short-run dynamic. One of the things that presumably happened in the fourth quarter is that people working in mortgage banking firms and in some other finance and real estate areas probably were more productive, and they got larger commissions. So, there was a direct link between compensation and production.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. Mike, I think you mentioned before that the Greenbook forecast is at the low end of a lot of outside forecasts, including the low end of the Blue Chip range in particular. You also mentioned that it was a little lower than most of our forecasts here. Obviously, the two things that are driving your forecast are net exports and the swing in inventories. As I look at other forecasts, particularly on the export side, you seem to be an outlier in terms of the growth in exports. Have you done any testing to see what the effect on your overall forecast would be if, instead of a growth rate of 0.6 percent in exports, you assumed a higher rate, say, 1, 2, or 3 percent?

MS. JOHNSON. I don't have a precise numerical answer to that question. If we were to generate higher export growth in our model by exogenously stronger income growth abroad, then we would go through a process involving certain interactions whose result would be to produce a net positive impact on U.S. GDP.

MR. TRUMAN. The effect on GDP would be 0.2 percentage point, I think.

MS. MINEHAN. A couple of tenths?

MR. TRUMAN. Yes. Exports are 10 percent of GDP. When they grow 2 percent faster, I think the answer would be 0.2 percent, roughly.

MS. JOHNSON. That implies a multiplier of 1.

MR. PRELL. The multiplier might be as high as 1½.

MS. JOHNSON. Yes, 1 to 1½ is usually what we use as a rule of thumb in our calculations.

MS. MINEHAN. What are the underlying reasons for your forecast of exports being as low as it is in comparison to other forecasts? I guess it's not important what other people think in some sense, but you must have a lower forecast for foreign GDP.

MS. JOHNSON. To a degree. The swing in exports in our forecast, as our models depict it, owes to the relative price term more than to what we are saying about the slowdown in the growth in foreign GDP.

MS. MINEHAN. So, that has more to do with the appreciation of the dollar?

MS. JOHNSON. Yes. Forecasters do vary in terms of the speed and strength of the reaction to changes in exchange rates that they put into their models. I don't think we really are an outlier in terms of the nature of our model being radically different from other models. Our forecasts are comparatively a little weak on some countries, but I do not think we are radically different. We do systematically take relative price effects into account, and I think we see them as quite elastic on the export side. Through both 1998 and 1999, the exchange rate has a significant effect in slowing exports.

The other missing piece is the decision on our part to utilize a forecasting strategy that we have wrestled with since the middle of the year. That relates to how we evaluate the very rapid growth of exports that occurred in the first half of 1997 and how to incorporate that development looking forward. We have taken a middle course. About two Greenbooks ago, we indicated a change in our strategy, as it were, in the sense that in forecasting growth rates, we were going to be guided by the fundamentals. We were not going to assume that because the growth of exports had exceeded our forecasts for the first half of 1997, we should extrapolate that forward. This strategy was adopted partly because we concluded that we did not understand some of the elements that had driven the high numbers in the first half of 1997. In addition, we had tested our model in as many different ways as we could, and we thought that on average it was robust and therefore that we should be guided by it. So, we have not added, if you will, an unexplained factor to the growth rate in 1998 and 1999. That causes a very rapid deceleration in our forecast. We should see it soon and we should know soon whether or not this was the right strategy to take with respect to forecasting export growth.

The data that we have, particularly the data we just got for the fourth quarter, had slightly higher exports in them than we had written down in the Greenbook but not by much or enough to make us think that this strategy of not assuming an additional unexplained element to export growth was the wrong thing to do. I think we felt supported by the Beigebook stories that we have been hearing, by the purchasing managers' data that were released today, and by the information obtained through the extra calls about the effects of Asian developments that we made with the help of our Reserve Bank colleagues. There are responses from members of the private sector suggesting that there is some evidence to date, along with increasing uncertainty and concern, that export growth is, in fact, going to slow dramatically.

MS. MINEHAN. I do not doubt that it is going to slow. Dropping off the cliff is the question. The other area of uncertainty that is actually more important in thinking about the slowing rate of GDP growth is inventories.

MR. PRELL. I don't know that it is more important. I think they're both very important in the short run here.

MS. MINEHAN. Okay, but given the change in the rate of change, don't inventories end up being more important?

MR. PRELL. Setting aside the very fine points of the effects of seasonal adjustments, net exports are the bigger drag in the first few quarters of this year. There is a dynamic here that I alluded to very briefly. I think you are right. As I have looked at other forecasts and tried to figure out the arithmetic I have seen, our consumption forecast looks relatively strong compared to many of the outside forecasts.

MS. MINEHAN. And business fixed investment?

MR. PRELL. Business fixed investment is in the ballpark of the outside forecasts. So, I think you've put your finger on two key elements. On inventories, I have seen forecasts that anticipate rates of over $40 billion of inventory accumulation through the year. That is well beyond the final sales growth that they are forecasting and suggests that they feel businesses will be happy with an ongoing rise in their inventory-sales ratios. I don't see any reason to anticipate that in the market that we see now. Nothing is in short supply. The latest purchasing managers' report said that absolutely zero things were in short supply, and prices are falling. It just does not look like an environment where goods producers or merchants want to stock up. So, we think our forecast is internally consistent and reasonable, but if anything in the final demand dynamics pushes the economy toward stronger-than-expected growth, we do not have a cushion here. Inventories would in that event add to the upside surprise relative to our forecast.

I don't want to intrude too much on Karen's territory but in regard to the comment that we have net exports falling off the fence on the international side, I think in the pre-FOMC briefing that we gave the Board yesterday--and you have all received copies of that briefing--there were some very interesting indications in the data from the other side of the Pacific that suggested very abrupt adjustments in current account balances in the fourth quarter. So, having something happen very quickly in the United States as a mirror image of that does not seem unreasonable.

MS. JOHNSON. The actual data will be complicated by a residual seasonality problem. If history repeats itself, the first-quarter data, as they get announced to the world, will show weaker exports because the fourth quarter is one that we estimate has a big positive residual seasonal factor. I think such a development in the first quarter might change the expectational climate a little.

I took this moment to check our forecasts of growth in the industrial countries compared to the outside consensus. Again, we are not radically different on the economic outlook for those countries. Our forecasts for the Asian countries are somewhat weaker than a reading of what others are saying. But the difference is small, and we felt we were behind the curve for a long time on that and we wanted to catch up to reality or what we thought it was. Mike's point is quite well taken. We already are seeing evidence of substantial improvement in the trade balances of Korea and several of the other Asian countries that have released trade data for December. We even have, I believe, a January number for Korea.

MR. PRELL. I don't want to extend this unduly, but I should remind you that not everyone is expecting a stock market decline. As I said, our consumption forecast does not look weak and our business fixed investment forecast does not look all that weak relative to other forecasts. But if we were to assume a modest rise in the stock market or something more, then our forecast would be very much closer to the consensus.

CHAIRMAN GREENSPAN. I don't want to prolong this either, but there is an interesting issue related to this on which I would like to have your reaction. When the Mexican problem emerged, the collapse in their trade was immediate and direct, but it had very little in the way of a multiplier effect because virtually everything Mexico was doing was vis-à-vis the United States. What is the impact, for example, of the Asian problems on Europe and Canada and elsewhere and in turn on our trade with those countries?

MS. JOHNSON. We asked our analysts to calculate mentally, econometrically, or indeed using any other estimating device they have available to them, how much they have lowered their economic forecasts for Canada, Japan, and major European countries in response to the events in troubled Asian economies. Of course, the answer varies depending upon the country. The most pronounced effects were on Japan. We used September as the benchmark month on which to base the assessments because that appears to be the month before the world generally began to recognize the scope that the Asian problem would eventually take on. In Japan, the weakening impact on GDP is on the order of a full 1¼ percentage points for 1998 and almost 1 percentage point for 1999.

We have written down the Japanese forecast considerably since September, and we attribute that almost in its entirety to the Asian effect; there are other factors but they tend to be offsetting one way or another.

For Europe, running my eye down the column of estimates, I would say the number tends to be about ½ percentage point of GDP. We have estimated an elasticity of one for our export demand from these economies. If their GDP slows by ½ percentage point, we translate that using an elasticity of one into their demand for our exports. For Canada, which is not to be overlooked because of its importance in our trade, the write-down has been significantly less. But it is still several tenths--2, 3, or 4 tenths--that analysts would attribute to the Asian effect. In the case of Canada, that has been offset by other factors to the point where the actual forecast has not changed by that much. Obviously, had the Asian slowdown not happened, we would be getting more demand from Canada because the domestic Canadian economy is quite strong. So we have repeatedly asked people to be very aware of the Asian impact both with regard to its effect on the exchange rate and on the real demand for our goods. They have come back with numbers on this order of magnitude.

MR. TRUMAN. I was at a meeting yesterday where there was a discussion of the IMF's forecast for particular industrial nations and for the industrial world as a whole. With regard to the effect of Asian developments, I was struck in listening to the forecast presented by Mike Mussa at the difficulty the IMF staff, too, was having because there are a lot of things one has to disentangle before one can isolate the Asian effects. On the one hand, the IMF staff has less of an Asian effect on paper, but Mussa does not have much influence over the individual analysts. So, he is less able to force consistency across the forecast than Karen has been. He has a smaller change in the current account balance for Asia but, on the basis of what he said, I think he actually would be closer than his staff to what we have. He gets numbers that are of the same order of magnitude. The one difference was that he was assuming the effects on Japan would all be offset by some combination of exchange rate changes and other developments; precisely what he had in mind was difficult to appraise because everything depends on one's starting point in September. He gets about the same effect as we do on North America and Europe, taken together. Like everyone else he had to guesstimate a multiplier there, and he had estimates that were in the ¾ percent range. Ours is probably a little higher than that, but it is well within the same ballpark. However, his analysis produced a surprising number for the Europeans at the table. Both the French and Germans said it was a much bigger number than they were thinking about and that is going to mark things down.

One point that it seems to me is very misleading from an analytical standpoint is that the Europeans always look at their growth rates on a year-over-year basis. So, year-over-year growth in Europe may be the same in 1998 as in 1997 because 1997 was a good year, picking up toward the year-end. But if we look at fourth quarter over fourth quarter, we get something like a half percent markdown and that is essentially the half percent that Karen was talking about because we used to have the same growth rate in 1998 as we had in 1997. The interesting thing will be to see how the disconnect gets resolved in 1998 between what is actually happening in markets as opposed to 1998 being as good a growth year as 1997 and incidentally how that will affect the mood in Europe, in particular.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. I'm afraid I am going to belabor this a little further. The income effect is one thing. We discussed that and we may come out at slightly different places about the importance of Southeast Asia or at least the countries affected so far and how well integrated our economies may be. Let me ask about the relative price effect and the effect of the exchange rate appreciation. Maybe you answered this and I missed it, but I am struck by the sharp change in the international outlook, which was evident in the last Greenbook as well as this one, and the fact, of course, that the dollar has been appreciating since the spring of 1995. I guess that is the heart of my question. I don't have a sense of what is going on in your forecast.

MS. JOHNSON. I guess I did not follow the question too well. I think if one looks at Chart 3--

MR. STERN. I am trying to say that it is not news that the dollar is higher.

MS. JOHNSON. In putting together the Greenbook forecast, we have not extrapolated the strength of the dollar. We saw the dollar rise from the spring of 1995 into 1996. Our view was that to some degree the rise was warranted because in the spring of 1995 the dollar was exceptionally weak, and there were good reasons for it to rise. I have not done this exercise and I cannot quote numbers to you, but one can look back at the forecast as it was presented a year ago today. Indeed in a briefing that was delivered yesterday, a copy of which I believe you have received, staff in Research and Statistics did precisely that. In January 1997 we were not expecting the dollar to continue to appreciate the way that it has, and we were not expecting the U.S. economy to be as relatively strong as it has been. So, most of the appreciation that you can see in Chart 3 from the beginning of 1997 to the beginning of 1998, which was quite considerable, was a surprise as it evolved.

We have gone back and looked again at how best to parse that into the relative exchange rates for the price terms that we put into the export equation and the relative price terms that we put into our import equations. We incorporated more currencies than we had before because so much of what was taking place that caused the dollar to appreciate involved currencies that we had not been systematically using in our calculation. We added a couple of currencies and then we decided that we should perhaps look at them individually. The end result of that analysis is that a great deal of the slowing that we are seeing is projected to come through the relative price term. The bars on that final chart, Chart 7, tell you what our model was telling us, namely that the appreciation of the dollar pushed up imports and will continue to push up imports for some time. Concurrently, it is going to slow exports through the end of the forecast period in 1999.

If the dollar appreciates further, we will send out a March Greenbook that includes an even weaker foreign sector. I don't know how else to adjust our forecast in response to the ongoing appreciation of the dollar. If the dollar simply stays as high as it is, which is loosely speaking what we have assumed, we are depending on price inflation in Asia to cause some real appreciation of the currencies there to offset some of the appreciation we have experienced. Until that comes on stream, we have these relative price terms that our analysis is telling us have powerful effects on exports and imports. Export demand price elasticities are not quite at 1 but are between 0.7 and 1 with some lags, and the lags in our exports are longer than those for our imports.

CHAIRMAN GREENSPAN. Any further questions? If not, who would like to start the Committee discussion? President Parry.

MR. PARRY. Mr. Chairman, economic growth in the Twelfth District picked up in recent months. The pickup was broad-based and it occurred in most areas of the District. Payrolls expanded most quickly in the states of Utah, Nevada, and Arizona, where employment growth accelerated to annual rates of 4.6, 6.6, and 9.5 percent respectively in recent months. Employment growth in California and Washington also accelerated, rising above a 3 percent annual average pace during the last months of 1997. With the exceptions of Idaho, Alaska, and Hawaii, employment growth in the District states was running above the national pace. Employment growth in the District also continues to outpace growth in the region's labor force, pushing unemployment rates down and creating very tight labor markets, particularly in urban areas. The District-wide unemployment rate fell to 5.3 percent in November, a full percentage point lower than a year earlier and the lowest it has been since March of 1990. In the District's fastest growing states, unemployment rates have fallen to between 2.8 and 3.9 percent. Construction and services are the fastest growing sectors in the District but manufacturing continues to be a key contributor to District employment. Manufacturing employment posted strong gains in recent months, spurred by rapid growth in high-tech and aircraft production.

The generally positive outlook in the District is tempered by reports of tight labor conditions and uncertainties regarding developments in East Asia. In several areas in the District, employee shortages have begun to hamper plans to expand production. Initial reports from District states indicate that recent developments in East Asia have reduced the demand for exports of some commodities, primarily raw and processed agricultural goods and lumber and wood products. At this early stage, other vulnerable industries, such as high-tech equipment, reportedly have not been greatly affected.

Developments in East Asia also are having some effect on business loan conditions in the District. In recent months, East Asian-owned branches and agencies, which account for 20 percent of total business loans in the District, have tended to tighten credit standards and terms on business loans, in part due to concerns about the capital positions of their parents. Reports also indicate that some commercial banks in the District have tightened standards for nonbank affiliates and subsidiaries of East Asian commercial firms. That does not apply to Japanese firms. Finally, reports indicate some increase in credit demand by Japanese firms, in part because their other credit sources have become less attractive or less available.

Turning to the national outlook, there have been few surprises with regard to the overall U.S. economy since we met in December. As expected, economic activity was robust last quarter and inflation remains subdued. Our outlook for 1998 is much the same as it was in December. We continue to think that at the current funds rate, growth in real GDP is likely to slow to about 2 percent this year and price inflation is unlikely to change much despite a pickup in wage inflation in our forecast. However, it is obvious that there is plenty of uncertainty in the outlook. Traditional models have been incorrectly predicting slower real GDP growth for the past year and a half. Thus far, however, the upside surprises have not been associated with rising price inflation. It is likely that economic activity is being boosted and inflation is being held back to some extent by a positive productivity shock, but we do not know how much of an effect this factor will have or how long it may last. I would feel better about the long-run prospects for the economy if economic activity were currently slowing to a rate that appeared to be sustainable in the long run. Given that we have yet to see such a slowdown, the risk to my forecast would appear to be skewed to the upside for both output and inflation.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Overall economic activity in the Richmond District appears to have strengthened rather than weakened in recent weeks. With respect to goods, some of the manufacturers in our region are reporting faster growth in January in both shipments and new orders. Service sector revenues appear to be continuing the strong growth they registered toward the end of 1997. At this point, it is too early to estimate what the impact of Asian developments on our regional economy is ultimately going to be. There is a lot of speculation but no hard information at this stage.

Wage growth has picked up--I think it is fair to say noticeably--in our District of late. Upward wage pressures are much more widely reported now than they were earlier, especially in the retail sector. There is no evidence yet of any broad attempt to pass wage increases through to prices, but we do have the impression that it is becoming a little easier to push some cost increases through in some sectors of the economy. For example, a contact at one of the Virginia airports indicated that the airport is raising rental rates and the fees they charge airlines. We have heard similar stories relating to the prices charged by some manufacturers and some retailers. This is not a general development yet, but we have heard a few stories along those lines.

Housing markets continue to tighten in our region. Inventories of single-family homes in the Washington area in particular dropped sharply in late 1997 due to increased demand. We have information that construction activity, construction costs and, in response to the question Jerry Jordan asked earlier, new home prices are rising in this area. We also see that in some other District markets like Charlotte.

Regarding the national picture, I still believe, like Bob Parry, that because of the strength of the domestic economy the upside risks are a greater danger going forward than the potential drag from net exports stemming from developments in Asia. In my view, to really boil it down, the key is consumer fundamentals. I believe they are exceptionally favorable at this stage. Labor markets are still very tight and wages are rising in general, however one may interpret the last quarterly ECI report. With inflation subdued for now, most of these increases are in real wages rather than in nominal wages. More broadly, real disposable income rose at an annual rate of almost 5 percent in the fourth quarter. Debt service burdens are high but they are manageable. In this situation, it is not surprising that consumer sentiment, on both the Michigan and the Conference Board measures, is at a very high level. Consumer spending, it seems to me, may remain quite strong this year not only in the first half, as is being projected by the Greenbook, but in the second half as well. If it does and if financial conditions remain favorable, business investment and housing activity are likely to remain robust as well.

Despite all this, the Greenbook is projecting that nominal GDP growth is going to decline by about 2½ percentage points, from close to 6 percent in 1997 to 3½ percent in 1998. That is mainly because of the substantial hit from Asia, although some of the factors that Cathy Minehan was suggesting are also relevant. In my view, it is not unreasonable to question whether such an abrupt decline in nominal GDP growth will in fact occur. Even if it does, the Greenbook is still projecting that the core CPI rate will remain steady at about 2½ percent on a consistently measured basis in 1998 and 1999 rather than declining further. This relatively favorable result hinges on the belief that the factory utilization rate is going to decline appreciably over the next couple of years and offset the impact of continuing tight labor markets.

In short from my standpoint, while the Greenbook projection is certainly plausible, its realization depends on a lot of developments that may or may not occur. I recognize, of course, that Asian developments could turn out to be worse than expected. But it seems to me that the striking rebound, especially in recent days, in most Asian stock markets suggests that with the possible exception of Indonesia, this crisis is being contained at least for now. Also, the negative effects of the crisis are being offset in part by the stimulative impact of reflows of capital to U.S. markets, which have helped to lower U.S. long-term interest rates. All in all, I conclude that the greater risk going forward is on the upside.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. Thank you, Mr. Chairman. The economy in the Philadelphia region remains strong and labor markets are tight, but there are few indications that inflation is accelerating. Businesses in the District continue to find ways to deal with tight labor markets. One illustration is an auto manufacturing plant in the District that was faced with a strong demand for a new sports utility vehicle. Recognizing the difficulty of finding 850 additional workers to add a third shift, the company spent some $30 million to install new robotic equipment over the Christmas holidays, thereby reducing the need for additional workers to 350. Indeed, the substitution of capital equipment for production workers by manufacturers is widespread in the District.

Construction workers are in strong demand not so much for adding bricks and mortar but because producers of everything from pet food to railroad wheels are installing new equipment as labor-saving devices.

In the residential area, as some others have reported, District builders tell me that the demand for new housing is very strong. As an example of that, Super Bowl Sunday is usually a very slow day for showing real estate, but this year the floor traffic was heavy and sales were quite strong. The price increases for new homes appear to be holding, although prices for existing homes remain flat. There seems to be a real change in tastes. If a seller has a regular sized bedroom and a regular sized bath, the house will not move. Buyers want bathrooms as big as traditional bedrooms.

We are hearing reports from some manufacturers who export to Asia that some orders are being cancelled and others postponed. The Asian problem is also affecting agriculture. Poultry is a big industry in the Third District, particularly in Delaware and the south central part of Pennsylvania. With the bird flu scare in Asia and the strong dollar, there is a slowing demand for poultry exports to Asia. As a result, this poultry is being sold on the domestic market and chicken prices are coming down.

Turning to the nation, I think there are three key uncertainties that we need to deal with. The first is that the national data show a very powerful economy in 1997 coming into 1998, fueled largely by strong consumption and investment growth. Our evaluation of the anecdotal information points to some slowing in demand stemming from the fallout from the Asian situation. But how much of a damping effect is uncertain, although I see more growth than the Greenbook.

The second uncertainty is that the disinflation process has had surprising staying power. Wage gains continue to be offset by productivity gains, so inflation is falling while corporate profits remain high. How much more staying power this disinflation process has is also uncertain, although I suspect it has a while to run. If businesses cannot get more volume out of existing resources, they undertake additional rounds of downsizing.

The third uncertainty, which is more for discussion tomorrow so I will touch on it only briefly, is that monetary policy is roughly neutral, but it may be tightening implicitly with the nominal fed funds rate held constant and inflationary expectations falling. However, the money supply has been growing faster lately.

What should we make of these uncertainties in the national economy? I think we need a wide peripheral vision because I don't think we know where the real danger is going to come from.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Thank you, Mr. Chairman. Over the past year, the performance of the Sixth District economy generally has paralleled that of the nation, and with few exceptions that continues to be the picture that we see. Today, rather than run through a detailed commentary sector by sector, I thought I would concentrate my remarks on a few important differences and concerns that I have begun to note.

First, the Asian situation has had only a marginal impact on our District so far. Shipments to Asia have moderated, especially shipments of fertilizer, pulp, paper, and citrus. A large chemical company in our region experienced some cancellations of shipments to Asia but reportedly was relieved because it was unable to meet those shipments anyway due to a lack of available rail cars. People in our aerospace and defense industries also have begun to express concerns about potential declines in orders from the Asian part of the world. At the same time, some interesting asymmetries are appearing. One shipper reported recently that his firm had added capacity in anticipation of increased trade with Latin America, but the firm had to divert that capacity to meet its customers' demand for more shipping to bring imports from Asia to the United States. Finally, doing business in Asia is clearly more difficult for District firms. The owner of an upscale retail sunglass chain with over 2,000 outlets, including 19 in Asia, reports that his Asian sales are off some 70 to 80 percent. The bottom line for the District is that the overall effects from Asia have been minimal so far, with declines in our region's exports to Asia mitigated by stable growth of exports to Latin America.

Second, after their recent decline, prices of oil and natural gas are now approaching their historic break-even levels that in the past would have caused domestic drilling and extraction to begin to shut down. However, we see no evidence of that pattern this time around, and in fact the rig count remains at very high levels. The new drilling technologies that I talked about in past meetings have truly brought break-even prices to much lower levels. Hence, we don't expect to see the slowing in that sector that we would have in past cycles.

Third, real estate activity, especially residential, is more mixed in our region than appears to be the case nationwide. Commercial construction is strong, especially in grocery and class A office space, and this should balance the weakness we are seeing in residential construction. One cautionary note, however, is that I am starting to get numerous expressions of concern that pockets of excessively speculative commercial construction are emerging, notably in the north Atlanta market.

Fourth, we are getting mixed signals from lenders. Consistent with the loan officers' survey, credit still seems to be available and competition is fierce. When lenders are asked whether credit standards are slipping, the response is generally no, but lenders then go on to say that because of competition they are apt to grant loans at lower rates than in the past. This seeming disconnect between their perception of the links between credit standards and pricing for risk is something we should be concerned about.

Fifth, with respect to wages and prices, like everyone else we continue to get reports of labor shortages, and firms are either going to great lengths to hire qualified workers or they are curtailing production. For example, shipbuilders in New Orleans are resorting to hiring workers from overseas to fill the need for welders, shipfitters, and other workers. One national trucking executive reported idling 10 percent of his equipment because he has not been able to find qualified drivers. Despite such problems, however, wage increases in our region appear to have been held to moderate levels, and this also appears to be the case with prices. In our most recent manufacturing survey, the portion of firms reporting that they are paying higher prices for materials decreased, as did the proportion of firms indicating that they received higher prices for finished goods.

At the national level, we see an economy that continues to "hum along" with few, if any, of the signs of slowing that many of us have been forecasting for several meetings now. However, as others have observed, I do not believe that we have yet seen much of the slowing effects from the Asian problems and what they hold for the United States. Of course, the threshold question is how great the negative impact eventually will be. It does seem clear that the Asian shock will forestall the need for any policy tightening move in the short run. Clearly, the economy will not continue to get the boost to GDP from net exports that the recently released report suggests we got in the fourth quarter.

Stepping back, it does seem to me that the risks to any forecast have changed in two respects since our last meeting. They have gotten more symmetric and they have gotten greater. I guess one could say the distribution of risks now has fatter tails than it did the last time we were together. For me, the wild cards continue to be related to Asia, the consumer, and investment spending. While one certainly can argue that all these sectors will slow in coming quarters, there is also a significant probability that all may not slow. For example, it isn't difficult to anticipate that the increased disposable income that households may generate by refinancing their mortgages to take advantage of lower interest rates will stimulate and help maintain consumer spending. Similarly, the reports we get are that much of the recent surge in investment spending is motivated by the desire of U.S. businesses to cut costs so as to maintain profit margins in the face of competition from lower import prices. Clearly, this downward pressure on prices will continue as a result of the Asian crisis, and this could help maintain investment spending at higher levels than would otherwise be expected.

Finally, of course, as others have suggested, the impact from Asia may prove to be either substantially more severe or substantially less severe than our most likely scenario indicates. On balance, as I hope my comments have suggested, I think we continue to be in a period of very satisfactory economic performance, but one where the range of potential outcomes is even wider and more uncertain than when we last met. While the Asian shock and its fallout may give us significant slowing in the economy's expansion and a further respite from price pressures, I think it is equally likely that we may find ourselves by late fall or early winter of this year with almost the same set of policy questions that we faced in November and December of last year. Until we see the Asian effects play out, I would say again that I hope we can allow ourselves to enjoy the moment and use this period of time to talk out our long-term policy preferences. We should continue to make the point that low inflation is also pro-growth and pro-employment, and that is something that not only central bankers should get excited about. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. Well done. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. The Seventh District economy continues to expand at a moderate pace with only a few reports thus far that Asian developments have had any measurable impact. However, many of our contacts expect their businesses to be affected as the year progresses. In the consumer sector, retailers generally ended up being pleased with holiday sales, but the bimodal holiday shopping season that I mentioned at our December meeting was quite evident. After a post-Thanksgiving lull, sales picked up noticeably in the week before Christmas and that strength then continued into January, benefiting in part from gift-certificate buying as well as the strong housing market that boosted appliance sales. Our survey of Michigan retailers showed the largest December sales gains since 1994. Light vehicle sales probably averaged about 15 million units at an annual rate in December and January combined, but as noted in the Greenbook, the monthly sales numbers for December and January are distorted by reporting period shifts and efforts by Toyota and Honda to achieve best selling car status in 1997. Although low interest rates and low gasoline prices have reduced the cost of driving, incentives remain extremely important in maintaining sales near the 15 million unit pace.

Manufacturing activity remains quite strong in the District. Purchasing managers' reports for January indicated that overall activity expanded at about the same pace as in December in Chicago and at a somewhat faster pace in Detroit and Milwaukee. Contacts noted very strong demand in industries such as aluminum, steel, farm and other heavy equipment, appliances, chemicals, paper, and publishing.

In terms of the Asian situation, the impact on most Seventh District industries is still more speculation than reality. Auto and steel companies are worried about possible increases in imports from Korea and Japan, although that doesn't seem to have happened yet. Several contacts from a variety of industries reported that Asian manufacturers and distributors are experiencing significant difficulties in borrowing funds for working capital and other purposes. Our business contacts report dramatically slower business operations in those Asian countries, and friends of mine who have been to Thailand indicate that even the traffic in Bangkok is now bearable.

For most businesses in the Seventh District, the major problem continues to be hiring and retaining competent workers. In other words, labor markets are still very tight. Help-wanted advertising increased in all our major metropolitan areas over the last three months of 1997 and that is in contrast to the national index, which in December was lower than in September. The latest survey by Manpower Incorporated indicates that hiring plans nationally for the second quarter of 1998 are up somewhat from the first quarter and about the same as for the very strong second quarter of 1997. These results will not be released until February 23 so they should be treated as confidential until then.

Manpower's own domestic business apparently is very strong with demand for workers widespread but especially robust at computer, telecommunications, pharmaceutical, and food processing firms. Other contacts indicate that high salaries for COBOL and FORTRAN programmers are drawing some retirees back into the labor force, but wage pressures generally continue to be relatively modest, given the tightness in labor markets.

Turning to the national outlook, I think the risks are somewhat more balanced today than they seemed to be in December. The level of real GDP currently appears to be above potential. Labor markets are the tightest in a generation and yet there is still no hard evidence of accelerating inflation. Looking ahead, the key issues are Asia, inventories, and, of course, inflation. Considering the composition of fourth-quarter growth, our view is that growth this year will slow to its trend rate due to sizable drags coming from declines in net exports and inventory investment. As we discussed earlier, the biggest sources of uncertainty are the Asian situation and the possible inventory correction. Our outlook is about as pessimistic as the Greenbook regarding Asia and slightly less so on the outlook for an inventory correction. Despite this anticipated slowing of GDP growth, we expect labor markets to remain tight. Without mitigating factors such as recent exchange rate movements and heightened competition from imports along with energy price declines, we would be concerned that CPI inflation was poised to increase.

All in all then, we face risks on both the upside and the downside. Without significant slowing in the growth of economic activity, wage and price pressures appear likely to intensify. However, the Asian crisis seems to offer the kind of non-monetary policy restraint that can keep aggregate demand in line with the economy's potential output.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. The New England economy continues to perk along with perhaps more strength than at least some other regions. Employment is rising at close to the national pace. The unemployment rate in all six New England states is below the nation's and well below in the case of Massachusetts, New Hampshire, and Vermont. Commercial vacancy rates are extremely low in the metropolitan Boston area where there is a small amount of speculative construction under way, but real estate markets are more mixed elsewhere in the region. In particular, Hartford's rather weak commercial real estate recovery has been hit hard by the closing of several major retailers, leading to an increase in retail vacancy rates and a drop in retail rental rates. Prices and wages remain stable overall, though manufacturing wages have begun to increase at about the national rate after earlier weakness. Premiums continue to be paid for hard-to-find employees with high-tech engineering or software skills.

Our take on the Asian crisis, to the extent we know much about it at this point, was reported to the Committee in the earlier memo that we all received, but I want to underscore one thing. That is the potential impact of the downturn in Asian economies on the region's universities. It is expected to be significant both in terms of the ability of those universities to attract students from the Asian countries, which have been very important in terms of full-paying foreign students, and in the ability of current students from Asia to stay on in universities in this country.

Two items of broad regional import dominated our economic news aside from the Asian crisis. First, we had a severe winter ice storm that affected the northern New England states in January. This storm hit the central and northern portions of Maine and New Hampshire, the area around Burlington, Vermont, and also north of the border in Canada. Fortunately, the storm came well after the New Year and well before the Martin Luther King holiday, so ski areas didn't lose holiday business, but that is one of the few good things we can say about it. Many businesses in the affected areas were unable to open for more than a week or at least the best part of a week, and some rural areas were without power for a much longer period. The storm was unusual in the extent of damage to utility property. Utilities in the three states estimate their total cost for capital replacement and additional labor at about \$80 million, with \$60 million of this in Maine alone where the storm covered a wide area and resulted in some destruction of transmission towers as well as power lines. The full extent of the damage to forestry and agriculture will take longer to estimate. The spring's logging and maple syrup harvesting activities should provide further information on the extent of damage to the forests.

A couple of interesting vignettes: One apple grower reported that apple trees were comparatively unaffected by the ice because the latter's weight was less than the capacity of most trees to hold relatively heavy fruit. Dairy farmers report that cows were having difficulty producing milk as a result of the storm. Finally, with true New England spirit, members of the Bank's Small Business Advisory Council commented on the increase in neighborly spirit that has prevailed.

CHAIRMAN GREENSPAN. Is that in the GDP?

MS. MINEHAN. It can help! The second issue of note is the purchase of Digital Equipment by Texas-based Compaq Computers, billed as the largest takeover in the history of the computer industry. This purchase along with Compaq's recent acquisition of Tandem makes the company the second largest computer maker in the world behind IBM. Now, this is not important in terms of the overall macroeconomic picture perhaps, but only a couple of years ago employment repercussions from the purchase would have caused waves of fear throughout New England. Now, I would guess that businesses are just waiting to snap up any laid off high-tech workers. It has gone by without a ripple on the local scene.

On the national scene, we agree with the Greenbook's assessment of rather robust consumption at least for 1998 and renewed strength in business fixed investment at least from the fourth-quarter level. We also are largely in agreement with the Greenbook forecast regarding the drag from net exports due to the Asian situation, though as I noted before we could quibble a bit about whether exports will be as weak as the Greenbook suggests. However, we are most skeptical about the relatively large negative inventory swing. We agree that there may well be negative inventory effects, but we wonder how long and how negative they will be given the relative strength of final sales, the prospects for business spending, the view in financial markets, abundant credit, and strong consumer confidence--all things that people have mentioned. Only one other major forecaster, DRI, projects as significant an inventory correction, again giving us some pause about the risks inherent in this aspect of the forecast.

Overall, we anticipate a bit stronger economy in 1998, with growth much closer to potential than the staff forecast and some upward pressure on core inflation as a result.

Thus, I agree with others who have spoken before that there are risks on the upside to the Greenbook forecast, though it is not possible to talk about a forecast these days without mentioning the potential for downside Asian-related risks as well.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. The Eleventh District economy remains strong in almost every respect, although the crisis in Southeast Asia has caused expectations to be downgraded considerably. The January go-around among our directors, for example, was noticeably less positive than December's in terms of expectations.

Nationally, in my first cut at forecasting 1998, I had real GDP growing at 3 percent and the CPI at 2 percent. Then, I was shocked to see the Greenbook's inflation forecast come in under mine, so we are going to go back to the drawing board. That has never happened before. I think a good rule of thumb on these forecasts is to take the Greenbook forecast and add about a percentage point to real growth and subtract about a percentage point from the CPI! [Laughter]

MS. MINEHAN. That would be tough!

CHAIRMAN GREENSPAN. The trouble is, they already did that! [Laughter]

MR. MCTEER. I must say that their strong final sales number upset my calculations a little. In any case, we really do expect to see more of the same--very low inflation combined with quite strong real growth.

Most of what I have said in recent meetings relating to the growth of the Eleventh District economy being stronger than the national average, particularly in terms of employment growth, still applies but with one exception. That is oil drilling. Oil drilling has been straining against capacity limits even with the lower crude prices that we have seen in recent months. It is still very strong, as Jack Guynn indicated, but drilling costs have increased substantially during the past year. Those higher costs and related budget constraints among the smaller and weaker firms have relieved some of the capacity constraints. It is now possible to find a rig again where one could not be found before, although at exorbitant prices. Some of the concern regarding the Southwest has to do mostly with the direct impact of the Asian crisis but also to some extent with the indirect impact coming through our region's largest trading partner, Mexico. Mexico is vulnerable not only to the Southeast Asian export competition but also to the continued low or declining oil prices. I find it remarkable that in recent days

We made a special effort to gather information from many of the larger companies in our District about the impact of the Asian situation. It is hard to draw any firm conclusions about the net impact on the region, but a few patterns are worth mentioning. First, in high-tech, the impact is nearly a wash. Computer producers like Dell and Compaq expect to benefit from some lower prices for semiconductors, while chip producers like Texas Instruments and Motorola expect to lose.

Second, the area's defense contractors like Bell Helicopter, Lockheed Martin, and Raytheon have expressed surprisingly little concern given their exposure in Southeast Asia. For example, Bell Helicopter has a couple of big orders in Asia that are now questionable, but they expect to make up for any declines in sales to Asia by increased orders from South America. Area ranchers are net losers as export demand falls off. The Asian credit crunch is beginning to be noticed in Texas. a very large chemical company reports that they are not selling much petrochemical feed stocks and chemicals to Korea because of an unwillingness to accept letters of credit from Korean banks. The expansion of Samsung's very large new chip plant in Austin is being delayed by a lack of financing. And we have heard anecdotes that Japanese banks have stopped rolling over lines of credit to some large Texas companies. Fortunately, those companies have access to other sources of credit. Let me conclude by saying that given the strength and momentum of the Eleventh District economy, if we are going to be hard hit by the fallout from Asia, this is a good time to have it happen.

At the national level, the prolonged combination of rapid output and employment growth with lower inflation continues to test the limits of the old rules of thumb and argues for a revision of those rules. The momentum going into this quarter and the disinflation and deflation in the pipeline, augmented by Asia, suggest that the unemployment/inflation tradeoff will continue to improve before it gets worse. We should be glad we removed the bias toward tightening at the last meeting, and it is not too early in my opinion to start talking at this meeting about whether and when to ease. I believe that makes me the first to use the "E" word, Mr. Chairman. Rising real short-term interest rates as inflation has moderated have made policy tighter in some sense, as have the strength in the foreign exchange value of the dollar and declining sensitive commodity prices. The yield curve is close to flat and the graph in one of our handouts shows that very bad things usually happen shortly after yield curves turn negative. Only the monetary aggregates suggest that policy is accommodative, but we have not shown any confidence in the reliability of those measures for a long time.

So far at the national level, the Asian decline probably has helped our macroeconomic balance more than it has hurt, but it remains a potentially large negative.

For the record, I must say that I don't think the impact of the IMF's interventions has been altogether benign so far. Like the doctors of old, the IMF does make house calls; like the doctors of old, too often the favorite remedy is bleeding the patient. Fighting deflation with austerity seems rather problematical as does the apparently related goal of creating current account surpluses in developing countries, which means turning them into capital exporters. How much of Asia can have a current account surplus at the same time and what would be the impact on China if those countries achieve it? It may be true that many construction projects and other government-directed investments were ill-conceived in the first place, but canceling them in the midst of the crisis doesn't seem to be the best timing in the world. It may be that employment has been misdirected, but deliberately creating unemployment hardly seems the appropriate cure. We need to get the IMF to give us a line item veto!

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. The Tenth District economy continues to do well on balance. Manufacturing continues to operate at relatively high levels of capacity utilization and is a source of strength for the District as a whole. Significant investments are still being made in our region. Examples include the recent announcement by Intel of a billion dollar upgrade to its New Mexico plant and the expansion by Sumitomo of its New Mexico plant that manufactures computer chips. Construction activity generally has been flat in the District, but flat at a very high level. We still find firms in the construction industry that are trying to import labor into the region. The farm economy is generally in good shape, although developments in Asia remain a concern for some in agriculture as well as in other sectors of the regional economy. For example, IBP, which is a large processor of beef and pork, has seen a 50 percent drop in its international sales, with Asia especially contributing to that. Also, Japanese customers are negotiating very hard for better deals to circumvent the effects of the stronger dollar. Some firms we have talked to, as I think Bob McTeer mentioned was happening in his District, are having a little trouble because a number of their Asian customers cannot obtain letters of credit, and that has hurt the exports of those firms to that part of the world.

Still, District labor markets remain among the tightest in the nation, and the number of firms reporting larger-than-usual wage increases is rising. To illustrate this in terms of our current labor market situation, District unemployment was about 3½ percent in November and the participation rate was estimated at around 70 percent, in contrast to the national level of about 67 percent. About half the firms that we spoke to are raising wages more than usual to attract and retain workers. As an example, one manufacturer in Colorado reported average wage increases of about 8 percent last year. A furniture warehouse in the Omaha area reported 10 percent increases at the lower end of their pay scale and, as I mentioned, IBP for all of its concerns about Asia reported that they had to increase wages over 15 percent last year because labor markets were extremely tight for them. Firms also are reporting a variety of incentives to retain workers, including the expansion of benefits for their employees. Overall, therefore, we have a very strong economy in the region.

At the national level, we expect growth into next year at a pace very similar to the Greenbook forecast. Having said that, we have also found ourselves spending a lot of time trying to make sure we could rationalize our forecast. We looked at the same factors that others already have mentioned, including the outlook for inventory adjustments, the strong dollar, a fed funds rate that in our opinion is not accommodative at this time, and other factors bearing on a forecast of some slowing in final demand. But when we try to feel comfortable with that forecast, we remind ourselves of the very strong economy in the fourth quarter and apparently into the early weeks of this year. If the markets do not become unsettled, I think there is every reason to expect consumer demand to stay strong. And unless we have a somewhat more negative multiplier effect from Asia, we are left with some real upside risks to this forecast. On balance, this seems to be a time to wait and see. Thank you.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. The strength in virtually all sectors of the Fourth District economy in 1997 was sustained through year-end and appears to have carried over into at least the early weeks of the new year. The most common complaint we continue to hear has to do with recruiting and retaining people. Turnover of workers continues to rise, and reports of higher compensation to keep people are much more frequent, along the lines of several other comments that already have been made here this afternoon. The financial sector is finding it especially difficult to attract and retain people. One bank that is now represented on our board of directors put through a 7.7 percent pay structure increase, and the bank does not believe that increase is going to be adequate to retain the people they need for their operations. Job switching for significantly higher salaries is becoming more common for people with computer skills.

All parts of construction--residential, commercial, and industrial--were strong in the fourth quarter, and prospects for the spring and summer are reported to be very good.

Construction contracts increased significantly in 1997, and so far we have had a very mild winter in our part of the country so that construction activity has been seasonally strong. Bankers report a growing sense that retail space is overbuilt. Nevertheless, new proposals keep coming in ever-increasing numbers and they are getting financed. One director said that REITs have a ton of money. He indicated that there is ample funding for just about any project that gets proposed.

Manufacturing generally continues to be strong in our area. The production of large trucks reached peak levels in the fourth quarter, and orders are reported to be strong, suggesting that plants producing trucks will be operating at very high levels through the first half of this year. Steel orders and production also continue to be very high. Even though imports are expected to rise, domestic absorption also continues to increase so domestic production and orders haven't yet weakened from very high levels. One director said that foreign steel would arrive just in time to meet his company's needs. Another asserted that the cutbacks and consolidations had ended in the health care sector and that we should expect faster increases in health care costs going forward. In fact, one director commented that on the basis of what he is observing, health care costs are starting to soar in western Pennsylvania. of a small manufacturing company said that there seemed to be a lot of people who were trying to put their money to work because she was receiving 4 to 5 offers to buy her company every week. Help-wanted advertisements that a year or two ago would have produced a lot of resumes now produce very few, and the only ones from qualified people are from individuals who already have jobs and are looking for big wage increases. Commenting on very strong worldwide demand for machinery to make plastic goods, one director said that there is an inordinate amount of capital available for acquisitions in that industry and that we should expect a lot of consolidation, both domestic and international.

Turning to the Greenbook forecast of the national economy, it is a good news, bad news story. The good news is that I really like this Greenbook forecast for 1998. The bad news is that I simply do not believe it. [Laughter] I have tried hard since last Thursday night to convince myself that we got this lucky in terms of the economy's performance and prospects because the crony capitalism and corruption in Southeast Asia has taken us out of the very difficult policy spot that we had gotten into. Nominal spending growth accelerated in the second half of last year to a pace well above what the forecasts were showing just 6 months ago, not just the Greenbook forecast but everybody's forecast. Nominal spending growth accelerated, real growth accelerated, and money growth accelerated. Every measure of money came in well above what had been expected, creating what looked to me like a tough spot to work out of. Then we got the Southeast Asian crisis that supposedly solves the problem for us.

When I look at components of the GDP forecast such as personal income, however, I see a strongly rising trend of nominal personal income growth through 1997 with all the favorable factors that contributed to it, and I then note that the forecast suddenly cuts the rate of growth by half to about the 1990-1991 recession pace. I do not believe that forecast. I think it is plausible to anticipate that real growth will decelerate, and the reason is simply that there is nothing in the universe for which the second difference is always positive. The second difference of everything must turn negative. If the second differences of real growth and employment slow because we have supply-constrained economies, then we simply have to hope that growth in final demand will slow simultaneously. I do not find it plausible to anticipate that the amount of slowing that is necessary in final demand is going to come from weaker exports. In fact, some companies in our area that view themselves as global companies now say that the Southeast Asian situation is an opportunity for them to export high-tech products that they want for their own foreign operations. The risk is that the reported slower growth of output and employment will materialize but not the slower growth in final demand. If so, we are going to find ourselves at some point with substantially much more upward pressure on inflation than is now forecast or showing through the numbers, and we will be scrambling to catch up. Thank you.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. With regard to the District economy, it is hard to imagine that conditions can get any better, with perhaps a few minor exceptions. I have described much of this to you in recent years, and I will not go over this terrain again. A particularly bright spot at the moment is construction activity. It is strong in much of the District and probably would be stronger if it weren't for the fact that there is a labor shortage in the construction industry and some projects are not under way or are going more slowly than planned as a consequence of that. Another favorable development is that there continues to be virtually no evidence of a broad-based acceleration of inflation. But having said that, wage pressures have continued to intensify, and I would expect that to continue as we go forward. It is perhaps also worth noting that the unemployment rate in the Minneapolis/St. Paul metropolitan area has now dropped below 2 percent. That is probably a record low, and it is also significant given the Twin Cities' dominant position in the nonagricultural sector of the District. Finally, Asia is not yet a significant issue in the District, although clearly people in agriculture and some other natural resource industries are, I guess it's fair to say, at least a bit concerned about it.

As far as the national economy is concerned, I certainly agree that there may be even more than the usual amount of uncertainty about the outlook. But, net, I am more optimistic about real growth than the Greenbook, and I get there mainly because of productivity considerations. To some extent, based on statistical judgments but more importantly on the anecdotes that we have heard over and over, I have become convinced that productivity is on a more favorable trend and therefore capacity is as well. I believe aggregate demand will grow sufficiently to equal that capacity. All in all, I am more optimistic than the staff about the potential growth of the economy.

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. As a lot of people have noted, the Committee is faced with an unusual degree of uncertainty. We all said that to each other in December but it is more true now. Uncertainty does not make today's decision harder; in fact, it makes it easier. The fact that there is no imminent danger of inflation or recession makes it easy to justify leaving the monetary policy levers where they are until more evidence accumulates bearing on the question of which way we might want to move them. Uncertainty at this level, however, does mean that we are likely to be facing very tough decisions in the next few months. The question is in which direction.

I can live with the Greenbook forecast, but I can also imagine the economy proving to be a good deal stronger than the staff projects. Consumer demand could prove even more resilient than they are projecting based on strong wage growth, attractive interest rates for financing homes, durables, and cars, and continued strength in the stock market. Yesterday's stock market increase seemed irrational to me since the best that could be said about the Asian crisis is that it may have bottomed out and that its currently predicted slowing effects on the U.S. economy and the rest of the world may not worsen any further. However, my thinking that market behavior is irrational, or indeed even the Chairman thinking out loud in the same vein, does not guarantee that such behavior will not continue. Favorable financing and general optimism also could keep business investment stronger than projected.

If the economy does prove stronger in the near term than the staff anticipates, we could be faced with a difficult dilemma as early as next month, especially if the big increase in the ECI at the end of 1997 turns out not to be a blip attributable to extraordinary bonuses for real estate agents and stockbrokers but the beginning of a broad-based acceleration in labor compensation. Some of the comments around the table seem to support that possibility. A decision to increase the federal funds rate would be difficult to defend publicly because the downward pressures from declining import prices would still be constraining inflation. Productivity might still be exceeding expectations and the prospect of a slowdown in the economy from the net export drag and slower inventory accumulation would still be highly likely even if it were not showing up in the current data. If all this happens, we will have to face up to a hard choice about raising rates in March. I do not know how we would come out, but I think Al Broaddus would be a lot less lonely! [Laughter]

Conversely, I can imagine the U.S. economy looking substantially weaker than the Greenbook forecast over the next few months. This scenario would depend largely on psychological factors and not on anything likely to be picked up in models. The list of downside factors includes some potential setbacks in Asia, such as the lack of political will to carry out the reforms in Korea or Japan or a new round of devaluations, possibly sparked by China and Hong Kong giving in to pressures to devalue. Other downside factors might involve a spate of poor U.S. corporate earnings reports that triggered a steep drop in the U.S. stock market and a fall in consumer and business confidence, negative domestic political developments, or escalating tensions in the Middle East. Any of these triggers would precipitate a steeper-than-anticipated reduction in U.S. growth and even a negative downward spiral that would threaten a world recession. I view this scenario as a lot less likely but a lot more dangerous than the first. The Fed might be called on to act quickly but decisively to contain the damage and try to restore healthy growth. The one thing the world cannot afford right now is a stalling U.S. engine.

The hard decision, especially if events prove only mildly more negative than now expected, will be to distinguish between a stall and a return to sustainable growth. I for one believe that the economy's recent history strongly suggests two conclusions: One, that the U.S. economy is a lot less inflation-prone in the face of tight labor markets than we used to think it was. Second, that tight labor markets have important positive effects on individual incentives to work and acquire skills and experience and on business incentives to invest in productivity-enhancing processes and capital improvements. Hence, I believe the Fed should be prepared to act quickly and decisively to limit damage from slow growth and rising unemployment.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. Usually on college campuses, the demand for economics courses goes up as economic conditions worsen, so I guess in a way I'm glad I switched careers. Looking at the forecast, inflation seems to be stabilizing at about 2 percent or so. That rate is arguably close to a definition of stable prices we might all endorse, given the measurement errors in the price indices. Even at the present levels of labor force utilization, we obviously are not far from NAIRU as far as I can tell. If the Greenbook is right, more wind will be taken out of final demand.

Among the Greenbook simulations with alternative assumptions, I prefer the forecast that is given with no stock market decline. It seems to me that all these possible declines in earnings could perfectly well be known and already capitalized in stock prices. So, I would not crank in lower stock prices and would get a slightly more bullish forecast. Even so, the unemployment rate does rise some, and while it remains below NAIRU, it does get a little closer. The summary of present conditions is that we are fairly close to target, both on the price side and the output side.

Most of you have mentioned the relevant risks. The upside risk is that unemployment is low, and usually that is the most important phenomenon. The employment cost index for the fourth quarter could turn out not to be a blip. We think it is, but we are not sure, of course. I must say that for three meetings in a row the combined comments of the Reserve Bank presidents have scared me. They seem to give a tighter tone than we get from looking at the national statistics.

On the downside, there are a lot of risks, many of which have not been mentioned so far. Commodity prices have been reasonably well behaved, gold prices are pointing down, term spreads indicate stable prices, inflation anticipations are turning down, and utilization rates are not terribly threatening. As far as I can tell, a lot of the volatile prices and exchange rates in Asia seem to have hit bottom. What I think a lot of you are reporting is not that the changes in exchange rates and related prices aren't going to have significant effects but that they have not been that significant yet. I think we probably will see more Asian effects on the domestic economy. Another risk is that if inflation really has dropped to a slightly lower level, we have a higher real funds rate than we had before, and this is a non-trivial factor. So, there are a lot of risks on both sides. It is hard to add them up. They are certainly in both directions in my view, and the weight on the downside may be a little bigger.

CHAIRMAN GREENSPAN. Governor Phillips.

MS. PHILLIPS. Thank you, Mr. Chairman. The year 1997 turned out to be a very good year, no matter how we look at it. Output expanded. The U.S. jobs machine was alive and well. Salaries and wages recorded real growth. A balanced federal budget came into in sight. Overall inflation was relatively well contained; goods inflation appeared to be about nonexistent, but inflation in the service industries did persist at about 3 percent. I don't think the 1997 growth rate is sustainable and strains are starting to show. Some of the reports around the table today have provided examples of labor shortages that now appear to be hampering some kinds of investment activity. Increases in labor costs show signs of edging higher at least in some areas. Although increases in compensation costs have been offset by increases in productivity, it is questionable as to how long that process can continue. Since the U.S. economy is service-oriented and costs are under pressure in that sector, it is hard to believe that aggregate inflation will be held at bay forever, but the indicators are better at least for the near term, particularly on the goods front.

While the U.S. economy is strong, Asia remains the big unknown. Had the Asian situation not occurred, effectively reducing the outlook for expansion in the United States and indeed perhaps world growth, I think something else would have happened to slow things down. We could have had a stock market correction. Inflation could have heated up. Demand, particularly in the labor markets, could have outstripped supply, and we could have seen more of an increase in salaries and wages. More likely, preemptive monetary policy would have been necessary. It seems to me that the Asian crisis is simply the trigger for the emergence of a slowdown that was bound to happen.

That leads to the next question, how much of a slowdown will we get? I find myself more optimistic than the staff in that I anticipate a more sustainable growth rate of 2¼ to 2½ percent for 1998. The fundamentals that made 1997 so strong have not gone away: a strong labor market and a good climate for continued investment--adequate cash flow, profits that seem to be holding up at least for now, reasonably low-cost capital, and strong balance sheets. Consumer spending should also hold up as long as employment is sustained, and if the mortgage refinancing boom continues, consumer spending should support economic growth in 1998, or at least there shouldn't be much of a slowdown in the growth of consumer spending. I admit that Asia is likely to be a decelerating factor, but even Asia creates some crosscurrents for U.S. economic growth.

In sum, there clearly are risks and they may have increased. But unless the stock market declines more than the staff assumes or unless the Asian situation produces more unanticipated surprises, the expansion should slow to a more moderate growth path in

1998 with inflation contained in the near term. If and when conditions stabilize in Asia, inflationary pressures are likely to resume for all of the traditional reasons, but it does seem to me that the timing is pushed out for now.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. I understand that the role of central bankers is, in fact, to take risks. I was rather surprised to learn that, coming as I did from consulting where we took no risks. But I am getting used to this job. The economy, as others have said, clearly entered 1998 with significant momentum. Since we last met, we have seen a number of indicators of notable strength going forward. Examples include consumer confidence, low long-term interest rates that make for a low cost of capital, housing permits, and something no one has yet mentioned, the rise in real adjusted durable goods orders. So, a number of factors point to strong forward momentum.

I will concur with what Governor Gramlich had to say. There are also a number of factors that suggest that inflation pressures may well diminish as we go forward in 1998. These include oil prices, commodity prices, inflation expectations, and capacity utilization. In addition, there is obviously what I think is the least understood risk, which is the turbulence in Asia. There we are getting a broad range of signals. The anecdotal evidence suggests that developments in Asia are starting to produce some slowdown in some U.S. industries, but I was surprised to hear how few presidents came forward with more of those kinds of stories. In addition, of course, some have indicated that the markets in Asia seem to have a point of view, perhaps irrational, that the situation there is starting to turn. Before this year is over--it could be in March or a little later--we may confront some tougher policy choices. I noticed that there is already a bit of a split in the Committee about the outlook.

For now, to make this short, the economy is strong, the impact of Asia is unclear, and the risks are greater. I happen to think that there is still greater upside than downside risk. But in that environment, I believe we are going to be together as risk takers, and I would encourage us to maintain a vigilant, maybe quite uncomfortable, waiting attitude to see exactly what emerges going forward.

CHAIRMAN GREENSPAN. Vice Chairman.

VICE CHAIRMAN MCDONOUGH. Thank you, Mr. Chairman. Recent reports on the Second District economy point to steady growth. That is an improvement over recent years. Both the payroll and household surveys indicate further tightening in the District's labor markets in December and in the fourth quarter overall. Payroll employment for New York and New Jersey combined grew at an annual rate of 2½ percent during the last three months of 1997. That is up from 2 percent in the prior quarter. Most of the job gains were concentrated in New Jersey and downstate New York.

On the whole, post-Christmas retail sales appear to be running roughly on plan, with inventories generally at levels that are satisfactory to store owners. Unseasonably mild weather across most of the region has hurt sales of cold weather items and has caused an inventory overhang of some seasonal merchandise. The early January ice storm that spilled over from the First District and hit part of upstate New York disrupted business during the first half of the month. It is not clear yet what lasting effect that storm will have.

The housing markets across the region appear to have gained steam during the fourth quarter, possibly assisted by unseasonably mild weather. Housing permits in New York and New Jersey, which had slipped below year-ago levels during the spring and summer months, rebounded in the fourth quarter, and there was unusually brisk activity in December. Single-family sales in New York State have picked up. The office vacancy and availability rates across the metropolitan New York area continue to decline. In midtown Manhattan the availability rate fell from 10.7 to 9.1 percent, and in our area downtown the rate has tumbled from 18.9 to 15.5 percent. Vacancy rates are similarly low in suburban areas.

I spoke at some length at the last meeting about the possible dangers coming from the Asian situation and expressed the view that the hoped-for continuation of good economic performance in the United States and in the world in general depended on the Asian situation at least not getting seriously worse. There has been some progress in Asia in that conditions in both South Korea and Thailand seem to be improving. I don't think Indonesia can be described that way. Japan, if anything, is perhaps even a greater potential problem as their financial and political paralysis seems to continue.

We agree at the New York Bank that the most likely forecast is one along the lines of that in the Greenbook. We see a slowing in growth during the first half of 1998 and some subsequent strengthening to a growth path of about 2 to 2¼ percent. However, we are somewhat more concerned about inflation than the Greenbook. That is largely because, as we continued to disaggregate the ECI, we noted that the employment costs for those portions of the service sector of the economy in which there is no import competition are rising rather significantly. That is the case not only in the fourth quarter but for about three quarters in a row, and I think it is something we have to watch very closely.

On balance, with the Asian risk on one side and the view that most of us have that the expansion will slow in the first half on the other, I think we are in a very good policy position. But I agree with a number of other speakers that the Asian situation could make things worse. On the other hand, the economy could be stronger and this rather troubling increase in costs in the service sector, which basically is not subject to import competition, could mean that we will have a policy challenge on the upside as well.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. Thank you, Mr. Chairman. We're coming down the home stretch here, and I'm afraid I am going to be quite repetitive, but I will press ahead briefly. Inflation, of course, is still showing no signs of rearing its ugly head even as the domestic economy rolls along strongly. We had a very strong fourth quarter and this quarter looks strong so far. We surely are going to get at least some slowing from developments in Asia. But as I look for reasons to expect any slowing from non-Asian sources--in other words for domestic reasons--I find it quite hard to uncover any, and I would be loathe to predict very much downside from domestic developments. In fact, it seems to me that the domestic scenario is distinctly one of upside risk, although we certainly should not ignore or forget the possible downside shocks that Governor Rivlin listed.

Asia, of course, is the major unknown of which we are aware, and it potentially skews the risks in both directions in the following sense. I was struck by the phrase that a writer used in yesterday's Financial Times when he observed that the Asian impact needs to be just right. If it is, that's going to be really good news. In fact, that is exactly what is being predicted by most observers and indeed in the staff projection we looked at a little earlier. If developments in Asia slow the U.S. economy just enough but not too much, that would be a very nice outcome. But if that assessment is wrong, the risks could certainly be skewed in either direction. If the Asian impact is meaningfully stronger than projected through metastasizing to other countries or for whatever other reason, then it obviously could cause a downside jolt that the Fed might need to respond to.

Alternatively, if the impact turns out to be meaningfully weaker and the crisis either is or for some time appears to be contained and its effects rather modest, that then opens the door to the high probability of a strong run by an already buoyant American economy. In that case, our longstanding upside concerns may very well be realized and we might have to respond. So, which way will it go? Will it be about right, stronger, or weaker? I think we're going to have to wait and see, and meanwhile, once again, steady as she goes.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Thank you, Mr. Chairman. Not a lot has changed since the last meeting to affect my assessment of the near-term outlook. The key forces at work remain clear. These are the tug of war between the momentum in domestic demand and the expected external drag from Asia and the tug of war between very tight labor markets and the forces that have restrained and appear likely to continue to restrain inflation. But there is, as nearly everyone has said today, a great deal of uncertainty about how these powerful forces will play out, particularly with regard to the uncertain dimension of the still evolving crisis in Asia. It seems to me, therefore, that there is not much for us to do for a while but to wait and see precisely how these crosscurrents balance out.

Relative to the Greenbook forecast, I would expect slightly stronger growth this year, with the expansion slowing down a little less to a pace close to 2 percent, and slightly higher inflation. I think my forecast is qualitatively in the same spirit as the Greenbook.

Given the crosscurrents and related uncertainties, a variety of outcomes could challenge monetary policy in coming quarters. I want to comment on two. One of them could easily come into play almost immediately and a second might arise later this year and into next year. Perhaps the most important question that we may have to confront in the near term is how long we can afford to wait for the effect of the spillover from Asia to slow growth to or below trend. This question is highlighted by the stronger-than-expected performance of the economy in the fourth quarter, including the somewhat more favorable than anticipated mix between final demand and inventory investment, and is also highlighted by the upward revision to the Greenbook forecast for the first quarter. The prospect for further strong employment gains and a further tightening in labor markets immediately ahead raises the question of how long we can afford to wait and how much further tightening in labor markets we are prepared to tolerate without some response. The good news is that the initial conditions afford us the luxury of waiting, assuming at least that we do not have to wait much beyond the first quarter to observe a slowdown in growth toward trend. Because it appears that inflation is likely to remain in check in the near term despite tight labor markets, there may be room to wait out some residual above trend growth, provided the forecast continues to point toward slower growth ahead.

My greater concern, however, is the forecast for inflation in 1999 and beyond. While this does not bear directly on our decision today, it highlights a transition that we will have to make and one that might reasonably affect the way we respond to developments over this year. The relevant issues are effectively highlighted in the longer-term simulations reported in the Bluebook. In those simulations, a combination of tight labor markets and dissipation and reversal of some of the forces that recently have been restraining inflation finally begin to put upward pressure on inflation into 1999 and beyond. One of the alternative longer-term scenarios in the Bluebook involves a tightening to prevent the persistent updrift in inflation. We may want to keep this scenario in mind if growth slows to below trend or the unemployment rate edges upward as in the staff forecast. The transition ahead may require either such a period of below trend growth or a tightening of monetary policy, and maybe both.

CHAIRMAN GREENSPAN. Mr. Rives.

MR. RIVES. Thank you, Mr. Chairman. Economic conditions in the Eighth District are consistent with full employment of the region's economic resources. District labor markets remain very tight, with measured unemployment rates showing no indication of departing from their lowest levels in 20 years. The diminished pool of qualified labor continues to temper employment gains in the District relative to those seen nationwide. Labor inflows from other regions do not appear sufficient to meet the demands of firms engaged in the current robust business expansion. Despite these caveats, reasonably strong employment gains persist in many manufacturing sectors and to a lesser extent in construction, especially nonresidential building activity. In some areas, increased wage pressures are accompanying the tight labor markets. A District executive in the health care field suggested that further productivity gains in that industry are unlikely in the near term.

On balance, Asian market turmoil does not appear to be exerting a serious drag on the District's economic activity. Recent discussions with business contacts in the District indicated that while some industries have seen appreciable disruptions, others have benefited from lower costs that foreign-based suppliers can pass along. Some agricultural prices have declined sharply in response to the Asian situation. On net, the effect on economic activity in the District appears to have been minimal and absent a dramatic deterioration of conditions in Asia, the effect should remain muted.

Even in the face of diminishing labor pools and disrupted foreign markets, District manufacturers remain optimistic for 1998. Orders appear to be holding firm, and so far there have been no broad-based adverse inventory shifts. Likewise, consumers appear to have perked up recently. Initial District reports suggested that retail sales increased between 2 and 3 percent on average during the 1997 holiday season over a year earlier, but those increases may be somewhat understated in view of post-holiday sales strength. As long as income and employment gains remain solid, there is little reason to question the forecasts of retailers who are expecting moderate to strong sales during the current quarter.

I will not repeat the indicators relating to the nation's economy that have been mentioned, but the national economy in our view is entering 1998 with substantial momentum. The economy appears very robust and shows few signs of slowing. As a result, the Eighth District forecast is on the high end of the range of the members' forecasts for nominal and real GDP growth and on the low end of the range for the unemployment rate. Considering the environment in which recent inflation gains have been achieved, we may be testing the bottom on inflation, with most of the future risk remaining on the upside.

CHAIRMAN GREENSPAN. Thank you very much. This appears to be the appropriate time for us to adjourn for the evening, and I look forward to seeing you tomorrow morning.

[Meeting recessed]

February 4, 1998--Morning Session

CHAIRMAN GREENSPAN. We will now turn to a discussion of the long-run ranges for the monetary aggregates, and I will call on Dave Lindsey.

MR. LINDSEY. The Committee was given some colorful charts yesterday, but today I will be referring to the colorless charts entitled, "Material for Staff Presentation on Long-Run Ranges." 3/

The first page of your handout reproduces the table on page 11 of the Bluebook except for a revision to the M2 and M3 growth rates for 1997 in the first column. The receipt of new data from the Investment Company Institute on the IRA component of retail money market mutual funds in the second and third quarters of last year has caused us to revise upward the annual growth rates for M2 and M3 by 0.3 percentage point each. Thus, the revisions place M2 growth somewhat above the 5 percent upper bound of its range for last year and M3 growth even further above its 6 percent upper bound.

The second column shows staff forecasts for money, credit, and nominal GDP this year. Nominal GDP and M2 are both expected to grow at annual rates of 3½ percent, which represents quite a slowdown for both measures. The Committee's own central tendency for nominal GDP has a midpoint a bit above 4 percent, implying a somewhat faster rate of M2 growth than the staff foresees this year, assuming flat V2. The lower panel of the next chart, also revised from the Bluebook, puts the implied prediction of a flat V2 over 1998 in the perspective of the experience of recent years. Despite the uptrend of V2 from mid-1994 to mid-1997, we expect the pattern of little velocity change that held late last year to persist through this year. The steady funds rate assumed in the Greenbook forecast implies that the opportunity cost of M2 will change little. We also believe that the sogginess of stock prices in the staff forecast will divert some inflows from stock mutual funds to M2 assets, with their stable principal, thereby short-circuiting any renewed updrift in V2. With that outcome, the behavior of V2 this year would parallel its performance during the three decades prior to the 1990s shown by the dots surrounding the regression line in the upper panel of this chart. Over that period, the velocity of M2 was relatively stable unless the opportunity cost of holding M2 balances varied.

Your next chart shows our forecast of a sharp decline in M3 velocity this year that follows from the staff's projection of 6¾ percent growth of M3. At more than a 3 percent annual rate of decline, the line this year is not only steeper than

3/ Copies of the charts used by Mr. Lindsey are appended to the transcript. (Appendix 3) the nearly 1 percent trend rate of decline over the three decades prior to the 1990s but it is also steeper than the 2 percent average rate of contraction over the three prior years. The staff foresees rapid M3 growth relative to that of nominal GDP this year, in part because businesses should continue to find the institution-only money fund component of M3 an attractive cash management tool. More important, depository institutions will need appreciable M3-type funding to finance lending if they are to maintain their share of relatively rapid debt growth.

Our projection is that the growth of the debt of domestic nonfinancial sectors, at 5¼ percent, also will exceed that of nominal GDP by a sizable margin. Hence, projected debt velocity, as shown in the lower panel of this chart, falls this year at almost a 2 percent pace. As may be seen in this panel, apart from the exceptional drop in debt velocity during the 1980s, this ratio has evinced little trend since the early 1960s. The fall in debt velocity this year mostly reflects larger business borrowing necessitated by flagging corporate earnings and greater merger-related retirements of equity.

Turning back to the table, three alternative sets of ranges are presented for Committee consideration. Alternative I retains the provisional specifications that the Committee chose last July. In recent years, the FOMC has not interpreted the ranges for broad money as suggestive of its expectations for growth over the year or two covered by the ranges. Instead, because of continued heightened uncertainty about the demand for broad money, the Committee has interpreted the ranges as being consistent with the trend of money growth under conditions of price stability. With true price stability, nominal GDP would grow at a rate of around 3 percent each year; that increase is composed of measured potential real growth of 2½ percent and an upward bias in the GDP price index of a bit more than ½ percentage point. If V2 were flat and V3 were to trend down by 1 percent as was the case in the three decades prior to the 1990s, then the midpoints of the provisional ranges of alternative I would match the expected growth of M2 and M3 under price stability.

The FOMC has interpreted the 3 to 7 percent debt range of alternative I differently than the ranges for the monetary aggregates. The Committee has intended the debt range to encompass the likely growth of debt over the year in question. The actual growth rates of debt over the last three years, in fact, turned out fairly close to the 5 percent midpoint of this range. This 5 percent midpoint, however, would be too high to characterize our expectation for trend debt growth under conditions of price stability. As we have seen, debt velocity has tended to stay about constant, apart from its decline during the unusual decade of the 1980s. Alternative III in the table adjusts the debt range down to 2 to 6 percent, matching the provisional M3 range and in effect moving the rationale for the debt range closer to one consistent with trend debt growth over time under conditions of price stability. Under alternative III, all three ranges would be roughly consistent with price stability.

Because the staff projects a step-up of debt growth from 4½ percent last year to 5¼ percent this year, though, the Committee may not consider 1998 to be an auspicious year to harmonize the rationale for the debt range with that of both broad monetary aggregates. If the Committee chooses to leave the debt range and its rationale unchanged at this meeting, it may wish to consider alternative II. This alternative encompasses the expected growth this year of all three aggregates. Thus, it makes the rationale for M3 more like the familiar one for debt in the provisional ranges. It raises the M3 range to 3 to 7 percent, so that the upper end is above the staff's projection of 6¾ percent M3 growth this year. Of course, raising the M3 range even more, say to 4 to 8 percent, would come even closer to centering the range around expected M3 growth for this year. But such a move would depart even further from the specified range for trend M3 growth consistent with price stability, making it even more wrenching in some future year to return to a price stability rationale for the M3 range.

I should add in concluding that the staff remains somewhat uncertain about its projections of the broad money aggregates relative to nominal GDP. M3, in particular, has shown itself to be subject to unpredictable surges or sluggishness in its non-M2 component. This behavior has resulted from changes in bank reliance on large time deposits, which are included in M3, versus borrowing funds from foreign offices, which are outside M3. Even M2 velocity behavior may not have returned all the way to normal. Specifically, the staff is still unsure whether any significant uptrend of V2 independent of the opportunity cost of holding M2 balances will resume in the years ahead as financial innovations or perceptions of attractive returns lead households to diversify further their savings away from M2 balances. Any such uptrend is unlikely to be of the dimensions of the shift in the early 1990s, but the possibility of continued shifts in money holders' portfolio preferences makes projecting the future behavior of V2 still error prone.

CHAIRMAN GREENSPAN. I am looking at the lower frame of Chart 6. It illustrates clearly the independent rise in V2 at any given opportunity cost, because the opportunity cost has not moved very much.

MR. LINDSEY. On balance, it has not; that's right.

CHAIRMAN GREENSPAN. The behavior of V2 since mid-1994 had suggested to us earlier that the relationship of V2 to opportunity cost was moving back to its previous pattern in the period from 1959 through 1989. Does the more recent pattern alter that view or merely emphasize that even this shift back, so to speak, has meaning only in the context of a further secular updrift of the trend in V2?

MR. LINDSEY. That is the open question. It is true that we think the velocity of M2 since mid-1994 has moved more closely to its behavior over the three decades prior to the 1990s. However, it also is true--and we sent the FOMC a memo to this effect--that we can fit an equation with only M2 velocity, opportunity cost, and a time trend from mid-1994 to mid-1997 that gives an annual growth trend of 1¼ percentage points. We certainly do not see that uptrend in the last part of 1997, as one can see from the chart, nor do we foresee such an uptrend going forward because as I mentioned in my briefing, we anticipate some weakening in stock prices in 1998. The latter should, as I said, short-circuit some residual trend toward increasing velocity. However, we are somewhat unsure of what the future holds in store. It is true that we have estimated a model over this whole period that in the early 1990s has velocity change starting to move in a gradual "S" pattern. This model fits recent years better than any of our other models. It suggests that the residual uptrend of V2 in 1998 will be only about 0.2 percentage point, virtually zero, and that it will move down to 0.1 percentage point in 1999. So, to the extent we believe the "S" pattern indicates that the updrift in velocity is gradually coming to an end, we would not anticipate much of an uptrend in velocity going forward. Whether one can believe that is, as I say, an open question. Personally, I feel fairly uncertain about the behavior of V2 going forward, but having said that, I certainly feel more secure than I did as we went through the early 1990s and observed that extreme updrift.

CHAIRMAN GREENSPAN. You mentioned the stock market as being the reason for bringing down V2 through the forecast period, other things equal. Have you tried to put stock prices in as an additional variable in your model to see if anything happens?

MR. LINDSEY. We have estimated a variety of M2+ and M3+ models in an effort to capture the non-M2 or non-M3 components of those broader measures. We have had some success but not a perfect success. One issue is that inflows to stock mutual funds were negatively correlated with inflows to M2 until the last two years. Inflows to both M2 and stock mutual funds subsequently increased to fairly rapid rates, so they became positively correlated. It could be pointed out that spending also was strong, tending to provide a third reason for that positive correlation. I would not say we were entirely successful in our efforts to construct models that capture well the behavior of M2+ or M3+. I would be interested in Don Kohn's view of that, though.

MR. KOHN. In a technical memo that was circulated some six months ago, we put in stock and bond mutual funds, and we came away at that time with some sense that when the growth of those funds was strong, M2 was weak. So, that result gave us a little confirmation of a tradeoff. Recently, I saw a chart that suggested the two had become more positively correlated. For example, stock mutual fund flows were extremely strong in the second half of last year; M2 also was strong. But income growth likewise was very strong, so the economy was generating a lot of savings that were allocated to both. I still think some of the evidence points to a bit of a tradeoff there, but we do not feel very confident that we have pinned down the substitution between capital market mutual funds and M2.

CHAIRMAN GREENSPAN. When we normalize M2, stock mutual funds, and stock market prices by consumption or income or some parameter of that nature, does the sign reverse on the relationship between M2 and mutual funds?

MR. KOHN. The original equation of a year or so ago had income in it, so income was being taken into account. I don't know about the more recent modeling experience. As I noted, the chart that I saw suggested that the two recently had tended to move together, but I don't know whether income was held constant in the model.

CHAIRMAN GREENSPAN. Expressing them as ratios to income or consumption is not the same thing as regressions that include those variables.

MR. KOHN. It is a different form.

CHAIRMAN GREENSPAN. It should be if it isn't. Further questions for David?

MR. GRAMLICH. Can I be forgiven a rookie question?

CHAIRMAN GREENSPAN. Those are the unanswerable questions.

MR. GRAMLICH. All these Bluebook ranges are four percentage points wide. Is that writ on a stone tablet somewhere? It strikes me that with all the financial uncertainties and the institutional changes that are occurring in the financial markets, it is very hard to pin these relationships down whether one uses "S" curves or whatever. Where do the four-point widths come from?

MR. LINDSEY. That, of course, is a matter that gets decided by this Committee. The historical precedent is that the ranges through 1987 were three percentage points wide and the Committee raised them to four in 1988.

MR. GRAMLICH. So, now we are in 1998 and might it go to five? [Laughter]

MR. KOHN. When it was widened, Governor Gramlich, it was as a result of some increasing uncertainty about what demand for M2 would be consistent with the Committee's expectations for nominal GDP over the coming year, especially since M2 does retain considerable response to opportunity costs. At the beginning of 1988, the Committee did not know whether interest rates would be rising or falling. The members were a little uncertain about the position of the demand curve as well. In order to have the ranges reflect both uncertainties, interest rates and position of the demand curve, they widened them to four percentage points.

CHAIRMAN GREENSPAN. Further questions? Who would like to start the Committee discussion? Governor Meyer.

MR. MEYER. Whenever we talk about the monetary aggregate ranges, it seems to me we are always caught between two kinds of decisions: whether we want to confirm or change the interpretation we give to the ranges and what boundaries we want to set. The staff presentation today reminds us that the ranges are set inconsistently in terms of their interpretation, and we have an opportunity to make them more consistent. M2 and M3 are set according to what I call a "price stability" rationale, one that is consistent with price stability and normal velocity behavior, and debt is set according to what I call a "projections" interpretation.

It seems to me that the principle of consistency has some value here. I think the ranges should be set consistently with one another. We could argue as to whether the "price stability" or the "projections" interpretation is the one we want to use. In my view, the choice between those two involves two principles. One I call convenience. As long as there is a lot of uncertainty or projected potential instability in the aggregates, the "price stability" interpretation is rather convenient. The other principle is consistency with Humphrey-Hawkins, or the spirit of Humphrey-Hawkins, and that would make me lean toward the "projections" interpretation.

In the midst of concern about the instability of the monetary aggregates, I am comfortable with the "price stability" rationale until stability emerges long enough for us to move back to a "projections" interpretation. Given that, I prefer the spirit of alternative III. In particular, I cannot think of a good rationale for alternative II because all it does is change which aggregate is inconsistent with the other two. Now, while I like alternative III in principle, I do not think the timing for moving to that alternative is particularly good. On the one hand, we would be lowering our target range for debt and raising our forecast of its growth. On the other, we would be drawing attention to the monetary aggregates at a time when we do not necessarily want to signal that we are going to place more emphasis on them. So, I would prefer to retain alternative I, and as the growth rate projections for the debt aggregate decline over time and become more consistent with the "price stability" rationale--if that should occur--we could then lower the debt range and change its interpretation, too.

One other observation that I would bring up relates to the ranges for the M2 aggregate. The staff has made a very good point that the M2 range seems to be almost perfectly centered on virtual price stability. It implies a ½ percent increase in inflation. So, it might be said that, by voting for alternative I, we are saying that price stability is indeed our long-run inflation target and is what we intend to achieve. I want to come back to that issue in my policy position statement, but I do not want my preference for alternative I necessarily to carry that implication.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. On the ranges, I think the main thing we need to do is to leave the M2 range where it is today at 1 to 5 percent. That would serve both as a signal of our continuing commitment to price stability and operationally as a likely rate of M2 growth that would be consistent with maintaining the low inflation environment we are now enjoying. All three alternatives have a 1 to 5 percent range for M2, so I am relatively indifferent among them. In this regard, it is worth noting, as Dave Lindsey indicated, that there is some evidence that the standard M2 demand equation is coming back on track. So, at least some case can be made for giving M2 a little more weight. I recognize the uncertainties that are involved, but I believe a little more weight to M2 would be desirable in our deliberations going forward. In that context, it seems worth noting that if in fact M2 is coming back on track with little or no velocity trend, the annual rate of M2 growth close to 7 percent that we have seen recently is clearly inconsistent with maintaining the progress we have made in reducing inflation.

At our Humphrey-Hawkins meeting in July of last year, I made my usual plea, Mr. Chairman, that we consider setting, one way or another, an explicit or at least a somewhat more concrete and precise longer-term inflation objective. A couple of recent developments make me want to put that issue back on the table and I will try to do so very briefly. First, we are very close to price stability right now--candidly, a lot closer than I thought last year or maybe a year and a half ago we would be at this time. With the measured CPI currently around 2 percent and with an upward bias of around 1 percent, the true underlying rate of inflation may now be at 1 percent or perhaps a little higher. That has a couple of implications as I see it. One is that we no longer need to get hung up on the topic of the transition costs of moving back to price stability. We are already there essentially. I think that is a powerful argument for trying to lock in price stability by announcing a somewhat more specific inflation objective. Also, with inflation as low as it is currently, the public has become more aware of and more concerned about deflation. For obvious and understandable reasons, there has been much more public comment about deflation recently than in the past. In effect, one might say we recently have gone through a mini-deflation scare. In the current low inflation environment, it seems to me that our longer-term policy strategy now needs to address deflation concerns as well as inflation concerns.

For that reason, I believe we should consider stating explicitly a lower bound for our longer-term inflation objective. It could be zero on an accurate price index or maybe 1 percent or so on the actual measured CPI. We would explain how we would avoid going below that lower bound. If we did that, I think it would help to clarify our strategy for situations that have begun to receive some attention very recently but that, understandably, had not previously received a lot of attention for four or five decades. In my view, that could help us avoid getting into the kind of situation the Japanese have found themselves in from time to time in recent years. Of course, if we announce a lower bound on inflation, then it would make sense for us to announce simultaneously an explicit upper bound as well. It might be in the neighborhood of 3 percent on the measured CPI. Even economists who think that some inflation is desirable for one reason or another generally agree that inflation over 3 percent or so is excessive. In any event, if we did set a lower bound, I believe we would have to set an upper bound because if we did not, we would invite credibility problems. That is one reason for giving strong consideration to an upper inflation limit today.

Very briefly, the other consideration that I believe strengthens the case for a more concrete inflation objective, and broadens it incidentally to include a Congressional mandate for price stability, is recent fiscal developments. We all know that there are major fiscal challenges still facing the nation in the long run. But for now, it strikes me that the members of Congress on both sides of the aisle are very proud of their achievement in balancing the budget, whatever the true underlying economic forces producing that balance may be. They feel that they have accomplished their longer-term strategic economic objective, the equivalent for them of our price stability objective. So, the stars may be in the right place for a change, and with a little push it might be possible to persuade Congress to give us some longer-term guiding principles for monetary policy. I would urge you, Mr. Chairman, to consider making a pitch in your upcoming testimony for a Congressional mandate, as you have in the past.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, I basically agree with the points made by Governor Meyer and would favor alternative I. It seems to me that the reasons for not changing the ranges that we have cited in the past, some of which Governor Meyer mentioned, are applicable today. Eventually, it will make some sense to go to what is shown as alternative III, but in view of the fact that debt is projected to increase at a faster rate in 1998 than it did in 1997, I don't think this is the best time to make that change.

CHAIRMAN GREENSPAN. Vice Chairman.

VICE CHAIRMAN MCDONOUGH. I prefer alternative I, Mr. Chairman.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. I also prefer alternative I, and I would like to associate myself with Governor Meyer's remarks. We have to formulate these ranges against the realities of our forecast for the real economy. I am not attracted to alternative II, but I feel a lot of attraction to alternative III because of the consistency of its ranges in terms of their interpretation and their consistency with price level stability. But I agree with Governor Meyer that this probably is an unwise time to move to that alternative. So, I would prefer to stay with alternative I and look for an opportunity to go to alternative III, or whatever the alternative III numbers might be when we are prepared to make that move.

CHAIRMAN GREENSPAN. Governor Phillips.

MS. PHILLIPS. I also prefer alternative I. It is interesting to observe that M2 growth is coming into closer alignment with the Committee's goal of price stability. I could at some point live with alternative III for many of the reasons that Governor Meyer stated. At this point, no change would be needed in the M2 and M3 ranges and the lower range for debt in this alternative would give us a consistent interpretation of the three ranges. My memory of how we got to alternative I is not quite the one that has been suggested. I don't think we were thinking in terms of inconsistency when the current ranges were set. As I recall, it was more that monetary growth was falling considerably. I have agreed with keeping the M2 and M3 ranges consistent with price stability during the intervening years, and I think that retaining alternative I is appropriate for now. But at some point we will want to contemplate moving toward alternative III.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Governor Meyer did some of us a big favor by articulating at the outset all the good reasons to stay with alternative I, and I agree with him on that. I am attracted to alternative III, but for now I would like to leave the ranges alone and not draw any further attention to the aggregates.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. I am going to sound very similar. I prefer alternative III in order to bring the ranges into a consistent formulation, but given the uncertainties surrounding the M2 and M3 forecasts, I can very easily accept alternative I as well.

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. Despite the enormous ingenuity of the staff, I don't think we understand these M relationships very well at all. My guess is that our understanding will not get much better. We may get some comforting returns for a while to some relationships with which we are familiar, but that might not last. I think the optimum position would be to tell the Congress honestly that we don't understand the Ms very well. We do not, in fact, discuss monetary policy in terms of the Ms between Humphrey-Hawkins meetings. Don Kohn dutifully mentions them because he thinks he ought to, but that is not the way we think about monetary policy. I don't think we want to take on that crusade at the moment. For that reason, I would stay with alternative I because I think it will involve the least complicated discussion with the Congress about why we are adopting particular ranges. I don't think we have a good rationale for changing them, although moving to a consistent set of ranges would be rather nice. But if I had my druthers I would be consistent in not talking about the Ms at all.

CHAIRMAN GREENSPAN. You favor alternative zero?

MS. RIVLIN. I would prefer alternative zero, but as a practical matter I am opting for alternative I.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. I support alternative I largely for the reasons articulated by Governor Meyer. Regarding the point that Governor Rivlin raised about consistency, we probably ought to postpone that debate for a long time because it will open up deep theological arguments that do not tend to get us very far.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Maybe alternative III later but alternative I today.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. I favor alternative I. If we did make a change, it would be interpreted as our placing increased emphasis on the aggregates, and I don't think we are even close to being in a position to explain that to the American people.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. I too favor alternative I. The only thing I might add to our discussion is that I think it is worth paying some attention to the aggregates, at least in the long run.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. I have been waiting for somebody to say something I agreed with [laughter], and I think Governor Rivlin got closest. I could certainly go with alternative I for now if we do not want to attract attention to the aggregates. But if we are looking to make a change somewhere, my preference would be to go in the direction of deemphasizing these ranges. Absent that, we might widen them to reflect more clearly our view that there is a great deal of uncertainty about these ranges.

CHAIRMAN GREENSPAN. Humphrey-Hawkins statutorily requires that we set monetary ranges. Now, I don't think we would be put in jail if we stopped doing it, but the law is the law.

MR. KOHN. The law requires that you indicate your plans and objectives for the growth of money and credit.

MR. GRAMLICH. Yes, the law is the law, but we could also write paragraphs.

VICE CHAIRMAN MCDONOUGH. I think we have been doing that for some time.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. I agree with alternative I. I think Governor Rivlin said it best. It would be nice in some sense to be more clear about what we are doing, but precedent, previous interpretation, ease of communication, and pragmatism--none of which has anything to do with monetary policy I suppose [laughter]--all suggest alternative I.

CHAIRMAN GREENSPAN. Mr. Rives.

MR. RIVES. We support alternative I for now and eventually moving to alternative III as Governor Meyer suggested.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. I am fine with alternative I also. I actually came to this meeting with a willingness to change the M3 range if that would make people comfortable. But I think the wisdom of leaving it alone and not calling attention to the aggregates probably still is the prevailing view, and that would be my thought.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. I cannot tell the difference between any of these alternatives either in the way the Committee operates or in the way we communicate with the public. I believe we should start to articulate a view as to what monetary policy is all about quite aside from the prices of goods and other assets denominated in units of money. Our objective has never been to stabilize or target or control any of those things but rather to focus on the prices of items that people buy that are denominated in units of money. We have used various monetary aggregates as a benchmark of whether policy was roughly in the acceptable zone, or a constellation of financial variables that gave us some sense of that. I think that once we approach something that most people would consider to be close to price stability, an expression I do not like at all, these ranges do not serve us well.

To the extent that it provides any guidance in communicating with the public, I think M2 is the only aggregate that is at all useful and I would not change its range. I would leave it at 1 to 5 percent, but I don't think that is going far enough. We do not want to stabilize prices. We want all prices to be changing all over the lot all the time, especially prices of certain things that should be going down, like computers. Prices of other things, like tickets to Cleveland Indians baseball games, we know are always going to go up. We want people to conduct their daily household and business affairs in the expectation that, roughly weighted in their minds, the prices of things that are going up are matched by the prices of things that are going down and the purchasing power of money is stable. I do not see that M3 or debt is at all useful in communicating that objective. M2 gets the closest to it but it is not satisfactory. The one change I would make for 1998 versus 1997 is that we not only announce a range but that we mean it.

CHAIRMAN GREENSPAN. I think that we are not looking at price stability per se as a goal because prices at the end of the day are not that clearly measurable. What we really are endeavoring to do is to reduce the implicit anticipated change in the purchasing power of money that imbeds itself in long-term nominal interest rates. We are trying to extract and stabilize that component of long-term rates because if we can do that, I think we can demonstrate that it will create the lowest level of instability in the economic system and the position in which money plays its maximum role for economic growth. So, it may be that the problem down the road will not be that of following money; it may be our great difficulty in determining how to measure it. We have had to measure unrelated supply variables, and it is interesting that as we get an increasing proportion of GDP composed of palpable intellectual products versus specifically high-tech products, the convention by which we define output has created significant price declines. What do we really mean by those prices and do we have any interest in stabilizing them per se? To carry Governor Rivlin's view further, the difficulty I think we are running up against and indeed the problems we have been having for the last number of years are likely a consequence of the major changes in technology that are fundamentally undercutting our notion of the supply of money, not in a real sense but in the way we measure it. It may be that we can find some way to track the true prospective change in the purchasing power of money, whatever that term means to people, as it deposits itself in long-term interest rates. That should be the Humphrey-Hawkins variable. The problem is that we do not have a clue as to what that number is; it is not something that we can explicitly measure.

MR. JORDAN. I would like to follow up for just a moment because there are two things along that line that we do know as economists, even if we are not able to communicate that knowledge effectively to the Congress, let alone to the public at large. Our theories tell us that if we have a world in which the purchasing power of money is stable, then all changes in nominal interest rates are simultaneously changes in real interest rates. We have a fully anticipated world. Second, when there are changes in the prices of things that people buy and sell, goods as well as assets and various services, those changes in prices denominated in units of money are relative price changes. If the price of something goes up by 10 percent and people think of that as being partly a change in the purchasing power of money and partly a change in relative prices, we are not there. If they can take the percentage change in the price of something as being totally a relative price change, we have achieved a condition of stable purchasing power of money. That means that price increases are matched by price declines of such items as computers and digital watches. Stability in the purchasing power of money is ultimately the benchmark by which our policy is going to be judged. If people conduct their affairs in the belief that the purchasing power of money, real income, and wealth change as prices change, then we have not fulfilled our objective.

VICE CHAIRMAN MCDONOUGH. If we cannot explain to the American people in understandable words, and not very many of them, what it is that we are trying to achieve, then we are not carrying out our function to create public policy as servants of the people.

CHAIRMAN GREENSPAN. Can we be employees instead of servants?

VICE CHAIRMAN MCDONOUGH. You would rather be an employee than a public servant?

CHAIRMAN GREENSPAN. No, than a servant. [Laughter]

VICE CHAIRMAN MCDONOUGH. Four or five years ago, I began to think that a target range for some version of the CPI had the merit that it could be explained and it would be understandable. But as time has gone on, I have come to believe that that does not work. That does not meet the very understandable verbal definition of price stability that you invented some years ago, namely that we have price stability when people are not taking inflation into consideration when they make either their investment or household decisions.

CHAIRMAN GREENSPAN. That is in fact what Jerry Jordan is talking about.

VICE CHAIRMAN MCDONOUGH. I agree. But I wouldn't worry about figuring out some new, very erudite way to express price stability because we already have the way to express it and it works beautifully. I think it is something we ought to stick to.

MR. BROADDUS. May I make a comment? I agree that it is a wonderful definition, and I think it has served us well. The problem is that the concept is difficult to communicate to the public. When the public thinks about the price level, it thinks about the CPI and similar measures. That's why I think we could strengthen our position if we used some kind of explicit guidepost related to that key number. It is the number that most of the American people associate with this phenomenon.

MR. MEYER. Could I add a point? It is not just our ability to communicate to the public, it is our own internal deliberations that are at stake here. We might ask where we are heading. Do we think we are where we want to be or do we think we want inflation to move down ½ percentage point, 1 percentage point, 1½ percentage points? This vague definition was perfectly adequate when inflation was 10 percent, and it worked when inflation was 5 percent, but now I think there is a real question--maybe among us and certainly among the public at large. There is an issue here.

CHAIRMAN GREENSPAN. It is a nice problem to have. I think there is a general consensus on alternative I. Would you read the appropriate language?

MR. BERNARD. This wording is from page 21 in the Bluebook. The paragraph begins with the general sentence on the Committee's goals: "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 1997 to the fourth quarter of 1998. 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
Governor Ferguson	Yes
Governor Gramlich	Yes
President Hoenig	Yes
President Jordan	Yes
Governor Kelley	Yes
President McTeer	Yes
Governor Meyer	Yes
President Minehan	Yes
Governor Phillips	Yes
Governor Rivlin	Yes

CHAIRMAN GREENSPAN. Thank you. Shall we move on to current monetary policy? I will call on Don Kohn.

MR. KOHN. Thank you, Mr. Chairman. I will provide you with some more impalpable, intellectual product that you probably would pay me not to give you. [Laughter] I will spend a few minutes discussing the long-run scenarios in the Bluebook and use them as a lead-in to a discussion of the stance of policy.

The Bluebook simulations examine the implications of the staff Greenbook forecast beyond 1999 and look at a few of the forces that could cause the economy to deviate from that baseline. In that risk assessment, we chose perturbations to the international and productivity assumptions underlying the staff forecast. That is not only because those are the areas where everyone is most uncertain, but also because earlier changes on both these fronts have been important in the baseline forecast. For that reason, the simulations can illuminate key characteristics of the baseline forecast.

The alternative international developments were modeled as a prolonged Asian shock--that is, a recovery of the Asian economies that begins much later than assumed in the Greenbook--reflecting the risks that structural problems may be less tractable, or the political will to deal with them more ephemeral, than assumed. Greater weakness in Asian economies in the out years is transmitted to us in part through a stronger dollar, in much the same manner as are the current Asian problems that are already built into the baseline. In some respects, this simulation also mimics the effects on the U.S. economy in the baseline of the substantial rise of the dollar before the Asian crisis hit, though that rise reflected strength at home as well as weakness abroad.

Similarly, the productivity shock--one percentage point faster growth than in the baseline--may pinpoint some of the effects of the apparent pickup in productivity already being felt in the economy. Last year, the staff raised its estimate of trend productivity by ¼ percentage point, and some of you have voiced suspicions that the gains may be more.

The "shocks" are alike in one important respect: Both involve favorable supply developments that put downward pressure on prices at any level of output, through lower import prices in one case and lower unit labor costs in the other. Consequently, in both cases, the unemployment rate can run below the NAIRU for a time without generating a pickup in inflation. But the simulations provide the cautionary note that these favorable effects on inflation are temporary. The lower unemployment rate may look like a reduced NAIRU, but inflation will begin to pick up if unemployment is held at that lower rate, even if the dollar remains at its elevated level or the trend in productivity is tilted up permanently.

In the baseline scenario, mild underlying inflation pressures begin to emerge in 2000 as the effects of the higher dollar of recent years ebb, nominal compensation rises to reflect higher productivity, and other favorable supply developments wear off. That situation is exacerbated by the swing to a declining real value of the dollar, which, by raising import prices faster than domestic prices, places upward pressure on inflation that must be offset by keeping the unemployment rate a little above the NAIRU. In actuality, any decline in the dollar would not follow the smooth path of the baseline, but rather will occur in fits and starts, which will affect the dynamics of the adjustment of prices and output. But the important point is that the dollar is more likely to fall than to rise over the long run, given what would otherwise be an unsustainable path of the current account. Such a development will leave the Committee with less pleasant choices than has the dollar appreciation of recent years.

In contrast to their effects on aggregate supply, the two shocks have very different implications for demand and, hence, for interest rates. Weaker Asian economies reduce demand and require an easier policy relative to the baseline to keep the economy on track. In the simulation, the added weakness of Asian economies effectively eliminates the need for the Committee to raise rates to contain inflation and calls for a modest easing at some point, leaving the funds rate about 75 basis points below the baseline for a time. The additional shock is somewhat smaller than the staff's baseline estimate of the Asian difficulties about to hit our economy, which have been largely responsible for eliminating the 100 basis points of tightening that had been built into the Greenbook last summer.

Despite the effects of weaker Asian economies, the relatively high level of real short-term interest rates that has developed over the last year or so persists in the baseline. The productivity simulation may give some insight into the good performance of the economy even as the real funds rate remains well above its long-run experience. A faster trend for productivity increases demand substantially, as the accelerator effects associated with attempts to keep capital growing in pace with the more rapid growth in output cause investment to jump, and as consumption rises with permanent income. However, supply only picks up gradually, in line with faster productivity growth, and real interest rates must increase to forestall inflation.

Indeed, strength in consumption and investment in recent years --driven in part by elevated profits and their effects on the stock market, as might be expected from a pickup in productivity--are an important reason why demand has remained robust despite high real interest rates. Of course, possible productivity increases are not the only factor that have been buoying spending at high real interest rates. Another important influence has been that in virtually all other respects financial conditions have been quite accommodative. Greater appetite for risk or perhaps perceptions that risk is now lower have helped to raise equity prices and have made credit available at exceptionally narrow spreads. And the level of short-term rates does not seem to have materially impeded declines in nominal and perhaps real long-term interest rates last year, helping to bolster demand. In the baseline, favorable credit and equity market conditions erode to a limited degree and real rates only edge lower before they need to rise once again for a time to counter the effects of dollar depreciation, remaining above their long-term values for some time.

Interest rates should be above equilibrium when the economy is operating beyond its sustainable potential and inflation threatens to rise to levels the Committee does not find acceptable. In large measure, the real short-term rate got to its current high level under such circumstances--though the methodology was a little unusual. The Committee tightened last March, and many members found reassurance in the subsequent, so-called "passive" firming of the real funds rate over the rest of the year as inflation, and presumably inflation expectations, fell. This firming occurred with other financial conditions accommodative, the output gap widening as the economy remained on a seemingly unsustainable track, and inflation projected to rise.

But Asian developments and incoming data have altered circumstances and projections over recent months. The central tendency of the Committee members' inflation forecast for 1998 has dropped ¾ percentage point since July, while the members' expectations for the unemployment rate at the end of this year are only a touch lower. In the past, for given levels of the output gap, the Committee has tended to move the nominal funds rate with the inflation rate--in fact by more, to ensure against getting "behind the curve" in countering either inflation or economic weakness.

In light of the level of the real funds rate and the way it came about, the Committee may see it as imparting a downside risk to the outlook. If so, the Committee might want to be especially alert to further increases through declining inflation expectations, and to signs that its high or rising level--or greater concern about risk by savers--was feeding through substantially to financial markets more generally and threatening to damp demand more than the Committee desired. Prompt response to such signs or to unexpected weakness in demand, say because the Asian situation was having a bigger effect than expected, might be called for. With trend inflation already at a low rate, the Committee might want to be cautious about taking the "opportunity" to let it drop substantially further. Moreover, in the context of a yield curve that already has built in some easing, market perceptions that the Committee was unlikely to validate its expectations might temper the response of long-term rates to further adverse demand surprises. We don't have much experience with the evolution of steeply downward sloping yield curves arrived at by declining long-term rates.

So far, however, high real short-term interest rates do not seem to have greatly affected other financial conditions, except perhaps for the dollar. Financial markets are still accommodative overall, judging from the rise in equity prices, the drop in bond yields, the further narrowing of loan spreads at banks, and robust growth in the monetary and credit aggregates. As a consequence, and perhaps because potential productivity gains and stock market advances continue to fuel spending, increases in real short-term rates and in exchange rates do not yet seem to have impinged substantially on demand. Strength in hiring persists, judging from low initial claims. Labor markets remain quite tight and wages may be on more of an uptrend than the staff has assumed. In these circumstances, the risks may look balanced to the Committee. Against the backdrop of the more robust economic projections of Committee members compared to those of the staff, whether the future drag on demand from the Asian crisis will be enough to stem potential inflationary pressures is uncertain.

Moreover, the anomalous position of tight labor markets but damped inflation probably buys the Committee breathing room to await some clarification of developments in either direction before reacting, without risking a serious deterioration of economic performance. If escalating compensation and narrowing profit margins suggest that inflation pressures are turning out stronger than expected, damped actual price increases as the higher dollar and lower oil prices feed through will keep inflation expectations down and add a little incremental restraint in the form of a higher real federal funds rate until the Committee responds. A weaker-than-expected economy will only tend to bring forward in time what may be a required easing of pressure on labor markets now built into the staff forecast, and the Committee should have time to react before the economy overshoots on the downside. In either circumstance, however, delay could easily become excessive, and a sluggish response awaiting unambiguous confirmation of the economy's direction could accentuate volatility in output and prices. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. Questions for Don?

MR. JORDAN. Don, you noted a few times in your remarks that from the standpoint of one financial indicator, the level of real short-term interest rates, the current stance of monetary policy may be interpreted as being restrictive. The measure you mentioned is the overnight interbank rate minus some index of prices--the CPI or some index like that. You then referred to a wide array of other financial indicators that do not suggest a restrictive monetary policy at all. These include not just the ample availability of credit from the banking industry but from the financial services industry more broadly, the relatively rapid growth of various measures of money, and the ongoing strength in various asset markets. How much confidence can we have in the overnight interbank rate minus the CPI as a gauge of the thrust of monetary policy in the face of all these other variables that are pointing in the opposite direction?

MR. KOHN. I tried to indicate in my briefing that I do not place much confidence in that measure at this point for the reasons you cited, President Jordan, and certainly that notion is inherent in the staff forecast. We have the real funds rate staying rather high. It edges off a little measured against backward-looking inflation indexes because inflation edges up a little in the forecast. Even so, it remains at a rather high level. In the forecast, that is perfectly consistent with moderate growth in output and essentially contained inflation pressures though the latter increase a little by the end of the period. So, I don't think there is anything in the staff forecast that fundamentally contradicts what you are saying. I do think a lot of people are looking at this relatively high real short-term rate. A number of members mentioned it yesterday. I think it introduces a bit of a cautionary note here. In fact, the real funds rate got to its current level because the Committee did not change the nominal rate as inflation expectations came down. Ordinarily, the Committee does follow inflation expectations. I think it had good reason not to do so last summer, but the way you got into this situation is a bit unusual. We do not have evidence that the high real funds rate is somehow pulling up longer-term rates but that could happen. I was trying to convey the view that if I were in the members' position, I would be looking for some evidence that the real rate was high and rising and beginning to affect other financial conditions. The way I was looking at it and the way I tried to voice it here was as an element of caution. It is something to look at but we do not see any evidence at this point that it is feeding through to financial markets or certainly to demand.

MR. HOENIG. Don, I may not be asking this correctly but from reading the Bluebook and listening to you, I had the impression that if we allow the unemployment rate to fall below the NAIRU after a positive supply shock, analysis suggests that inflation will re-emerge. Intuitively, there is the differing view that if we have a meaningful supply shock and it persists, we can in fact let the unemployment rate come down to below the NAIRU and not have inflation spike up. That seems to be part of the issue today. Could you give me a little more explanation in terms of whether you are letting the model drive this result or whether there are other considerations?

MR. KOHN. I see two aspects to that, President Hoenig. The model is driving the simulations. In the model, there is a NAIRU and if we put pressure on the labor markets, eventually that will show through in terms of rising labor compensation. That in turn will feed through to inflation if the unemployment rate stays below the NAIRU. In fact, we are very uncertain about the level of the NAIRU, and some of these supply shocks could be affecting it in a more permanent way. The cautionary note that I tried to sound in this regard was that some of those shocks may look as if they are lowering the NAIRU, and the productivity shock is a very good example. That was a big shock, a one percentage point shock. It provided an example of a situation where you could keep the unemployment rate low and have low inflation for a while. Then you had a choice as to how you wanted to take the effect ultimately, whether as permanently low inflation or an extended stretch of low unemployment. But I think it is possible for supply shocks to fool us to some extent into thinking we have a lower NAIRU and that these favorable price surprises--there is a choice between taking them in the form of inflation or in output--are permanent. In most analyses, they are not permanent. We can have more output for a while, but at some point the unemployment rate has to return to where it was, and how much we take in output will determine whether we end up in a lower, the same, or a higher inflation track.

MR. HOENIG. It's a part of the struggle we have been having over the last year.

MR. KOHN. Absolutely.

MR. PRELL. I think as a way of characterizing this, Governor Meyer in his earlier incarnation frequently used the term "an effective NAIRU" as a short-run, maybe transitional, phenomenon in the context of a more permanent NAIRU. That permanent NAIRU would re-manifest itself after the shock had run its course.

MR. HOENIG. Thank you.

CHAIRMAN GREENSPAN. Further questions for Don? President Minehan.

MS. MINEHAN. Thank you. Don, I was intrigued by the final comment in your presentation about the danger of sluggish reactions of monetary policy on the upside or the downside. It made me wonder if you know of any work on whether there is asymmetry in terms of the amount of time it takes the economy to react to a change in interest rates directed at weakness versus one directed at counteracting inflation?

MR. KOHN. I'm not aware of any asymmetry in the modeling exercises, but I think there is asymmetry in the normal course of raising and lowering rates. One point that I tried to convey and have the Committee begin to think about relates to situations when inflation and nominal interest rates are down to very low levels, though we certainly are not there. We have a nominal funds rate of 5½ percent right now. But one can imagine the economy running along at a 1 percent inflation rate and a 2 or 3 percent nominal funds rate. The economy then gets hit by a shock, and policymakers have that zero constraint on the nominal funds rate that is bedeviling the Japanese right now. So, there are some asymmetries from that perspective. There is no limit on how high a nominal rate can go, but there is a downside limit at zero. There is potential asymmetry with regard to the zero level on nominal wages that others have talked about. If inflation is very low or has started to go down to very low levels, there might be more adverse tradeoffs on inflation on the Phillips curve basis because people are reluctant to reduce nominal wages. We have seen no evidence of that, but that is something that people have been concerned about in the past. So, one thing that is being discussed now, and this is perhaps relevant to what Governor Meyer was saying before, is that we have inflation down so low or potentially getting so low, particularly if it falls short of current forecasts, that it affects how we think about monetary policy. President McTeer's rule of thumb yesterday was to subtract a percentage point from the staff's inflation projection.

MS. MINEHAN. You cannot do that!

MR. KOHN. You have a low rate of inflation and you might at least have in mind some asymmetries in the context of low inflation, particularly if it turns out to be much below 2 percent.

MS. MINEHAN. I am trying to translate that into thinking about how forward-looking monetary policy needs to be. You seem to say that there is at least some logic to being more forward-looking if we think the economy is going to be weaker in the future, particularly given where we are.

MR. KOHN. If we are at a very low rate of inflation.

MS. MINEHAN. Right. Then, given where we are, can you really say that there is a greater necessity to be more forward-looking if we anticipate an economy that is getting weaker than if we expect inflation to rise slightly in the future?

MR. KOHN. Ideally, of course, you want to have good foresight and act in a forward-looking way in both directions. Because inflation has been above its long-run target for a long time, the Committee may have a tendency to be a little more sluggish to react to downside shocks. After all, if inflation comes down another ¼ or ½ percentage point, that is a great result. But at some point, you have to consider whether you need to change that kind of response. If you are more sluggish on the downside than on the upside, for example, as is captured in some opportunistic kinds of scenarios, then you need to think about changing that sort of reaction as the economy gets to lower levels of inflation. There is the Japanese risk, if I can label it as such.

MR. PRELL. May I just inject a thought? I do not want to deny the argument about the real interest rate level, but I would like to remind you of some analysis we have provided you in the past, for example, with regard to the Akerlof-Dickens-Perry notion that at very low rates of inflation, the economy is going to run into nominal rigidities that will effectively raise the NAIRU. I think that view rests on some potentially questionable notions about the inability of our wage-setting institutions to adjust to a new environment. I have in mind the recent experience in which we seem to have been making faster progress toward price stability as inflation has gotten lower. There has been no evidence that nominal rigidity has been a major problem. As I said, one would think that more and more of those institutional and psychological barriers would break down over time. So, I think the list of arguments one can propound to support the notion that we need to be worried about low levels of inflation seems to have shrunk. I just wanted to remind you of that.

MR. GUYNN. Don, what can you say about the GDP path associated with your first long-run alternative? What kind of output loss is associated with that path to virtual price stability?

MR. KOHN. You can see that by looking at the two lines showing the rate of unemployment. We have a sacrifice ratio of 2½ over 5 years. So, in order to get the inflation rate down by 1 percentage point relative to the baseline, you need to hold the unemployment rate above the NAIRU for 2½ point years, or 1 point for 2½ years, however you want to think of it. That is the sacrifice ratio. I can give you some--

MR. GUYNN. One can do the mental calculations.

MR. KOHN. Right. In the price stability alternative, GDP in the years 2001, 2002, and 2003 is growing about 1¼ to 1½ percent less rapidly than in the baseline. In those years we have baseline GDP growing at rates of 2 to 2½ percent. So, we never get a recession in this alternative strategy.

MR. GUYNN. It comes very close.

MR. KOHN. It comes really close. Growth has to be slow enough to raise the unemployment rate above the NAIRU. We already have in the staff forecast a growth in output that is below potential and that has the effect of getting the unemployment rate up. You have to have a number of more years of that in the virtual price stability simulation.

CHAIRMAN GREENSPAN. Other questions? If not, let me get started on the policy issue. To repeat what we heard around this table yesterday, the key to the economic outlook and to our policy stance is very clearly how we evaluate the tsunami of the Asian crisis. It is rolling across the Pacific and the question is when it will get here and how large the wave will be. At the moment, all we are feeling is a little spray, but we know something is happening. The reason we know is that we have some hard evidence that suggests something more than a mere ripple.

We have seen a fairly pronounced decline in exchange rates vis-à-vis the dollar. We do not yet have firm data, but we strongly suspect that net capital flows into those countries have collapsed. And when capital inflows come to a halt or turn negative, that invariably means the current accounts are driven into significant surplus. That, of course, immediately affects the trade balance since the trade balance must fit into the current account. In Mexico, as we saw, there was a really sharp adjustment. It would not ordinarily be that steep when we are dealing with a number of countries since obviously their economies are functioning at different levels and growing at different rates. But because of the order of magnitude of the exchange rate adjustments we have seen in Asia, I suspect the declines in capital flows to those countries, when we are able to measure them after the fact, probably will prove to be steeper than they were in the case of Mexico. So, it is likely that after a lag we will experience a sharp discontinuity in our trade with those nations.

The collateral evidence other than the sporadic data we are seeing on trade accounts is the quite remarkable performance of commodity prices. The averages are really representative of virtually all the individual prices in the commodity price indexes. They drift gradually lower until the latter part of 1997. Then at the point when the Asian crisis worsens, they go down more decidedly. I am talking about the whole spectrum of commodity prices. About the only price that has not gone down is my favorite indicator, steel scrap. That has stayed up along with silver and platinum, which leads me to conclude that steel scrap is truly a precious metal. [Laughter] If anybody quotes me on that, I am dead! [Laughter]

VICE CHAIRMAN MCDONOUGH. People will not see it in the transcript for five years!

CHAIRMAN GREENSPAN. I have said that in disappearing ink for those who are taking notes! In any event, it is quite interesting. We basically are seeing the shadow of this Asian weakness. We have seen it in the price of oil, where demand clearly has slipped quite measurably. We are seeing it in copper, in aluminum, in gold, and even in some of the agricultural commodities where weakness in demand is bringing basic prices down. So, it is not as though we are sitting here with no evidence and wondering when the Asian tsunami is really going to hit us. As I said before, we are beginning to see its early stages. What we do not know is its eventual order of magnitude.

It is noteworthy that private forecasts of economic growth in East Asia are continuously being revised downward. Even the IMF, which very recently came out with lower projections, is apparently claiming in a confidential memorandum that the next revision will be down still further. It is very likely that we will see the initial impact in industrial production because this tsunami clearly is not something that relates to services. This is as close to a merchandise trade account/industrial production type phenomenon as we are likely to get. We will have a fairly good indication of the January industrial production index in a week or two as the data accumulate, but we do know that the weekly data have been tilting down. It is too soon to get a good sense of what is happening to inventories except that the industrial production data suggest that inventory accumulation was quite significant in November and December. It was not enough to raise inventory-sales ratios significantly, but clearly enough to stabilize what had been a declining inventory-sales ratio. Assuming that we are still in the throes of greater use of just-in-time inventory policies, the mere fact that inventory-sales ratios are flattening out, perhaps with a slight uptilt, suggests that there is some backup in inventories.

It is going to be difficult to measure how this affects labor markets because the effects of shifts in trade balances are not immediately likely to show up one-to-one in output and even less so in the employment numbers. When the economy gets down to the low levels of unemployment and extremely tight labor markets that we currently are seeing, the first response to any weakening in aggregate demand is likely to be labor hoarding rather than labor shedding. As a consequence, the measured productivity data are likely to flatten out. But at the first sign that there is any easing in the ever increasing pressure in labor markets, I think we probably will get a cascading effect, and we may get the same slip-off-the-ledge effect in employment, though only with a lag behind the off-the-shelf fall in goods production that we presumably are looking for sometime this quarter.

The importance of that obviously is crucial to how we come out on policy. It is very difficult not to conclude from looking at the data through December that we should expect to get, and indeed we very likely are getting, further pressures on wages, even factoring in the quite appropriate caveats that Mike Prell raised with us yesterday with respect to the ECI. The data show increasingly tight labor markets with a continuing contraction in the number of individuals both in the labor force and out who would like to work but are not working. The pressures in these markets by any measure we look at anywhere in the country are as tight as any time I can remember, and that goes back a very long way.

If, therefore, we do not get an easing fairly quickly in labor markets or it turns out that the tsunami, while very big for Asia, is only a small troublemaker for the United States, then we are looking at a stark demand situation, very tight labor markets, and upside inflation pressures. At that point, the only thing that can keep prices stable is what has been keeping them stable all along in an accounting sense, namely, productivity. Productivity gains in the fourth quarter have slowed from the outsized, frankly nonbelievable, gains in the third quarter. I might say parenthetically that the staff is estimating nonfinancial corporate productivity growth at a 2.1 percent annual rate in the fourth quarter and cumulative growth for 1997 of 3.2 percent on a fourth-quarter to fourth-quarter basis; this is a full percentage point higher than in the previous four quarters of 1996.

Productivity gains clearly have kept increases in unit labor costs at a very modest level; indeed, the latter have shown no signs of accelerating during the last several quarters. The increases in such costs in the four quarters ended in 1997 are estimated at slightly under 1 percent and at 1 percent for the previous year. Similarly, unit nonlabor costs have continued to decline and overall unit costs for all practical purposes are within shouting range of zero and have been that way for the last 12 to 18 months. With profit margins opening up, there has been a modest increase in prices--something in the area of 1 percent for the implicit deflator and slightly less for the nonfinancial corporate sector. So, the growth of the cost structure is effectively zero. Indeed, all of the price increase is, in effect, increased profit margins.

As Don Kohn said, we have some fairly significant leeway here. While I anticipated that the statistically measured productivity number for the fourth quarter of 1997 would be artificially low merely because of the clearly noncredible 6.7 percent annual rate of increase in the third quarter, the fallback to 2.1 percent is a lot more than I thought it would be. In looking at the monthly price patterns, we are seeing a failure of pipeline inflation to emerge. This is wholly consistent with an economy that is engendering nominal acceleration in wages from the productivity side and evidently not from pressures on resources per se, even though it is very difficult to reconcile the latter notion with labor markets that already are very tight and becoming increasingly so.

As a consequence of all this, it strikes me that we are dealing with a situation in which the next several weeks are going to determine the extent to which the tsunami will hit us. It will probably take a couple of months for us to get a much better fix on the order of magnitude because it will take that long to get a better fix on what is going on in East Asia and also its impact on Europe, Japan, and Canada. We also will have a couple more months of data on orders and production. It will be very interesting to see whether the incoming data tell us anything more about the issue that Vice Chairman McDonough raised concerning the ECI services numbers, which are a counterforce to the slowdown of inflation in the goods area.

To summarize and merely reaffirm what I heard around this table yesterday, there is considerable concern that a deflationary push from East Asia is going to affect the economy in the short term. We do not know what its size will be. This suggests that a position of wait-and-see is clearly the appropriate policy for the short term. I am not sure whether we will know enough about the magnitude and the ultimate consequences of the

Asian effect in time for the March meeting, as Governor Rivlin suggested, but clearly we are going to know substantially more as each week goes on. I think it is going to be important to be sensitive to moving in one direction or the other if called for. For the moment, I see very little choice but to stay where we are, namely "B" symmetric. President Boehne.

MR. BOEHNE. I support your recommendation, Mr. Chairman. Your logic is indisputable.

CHAIRMAN GREENSPAN. Vice Chairman.

VICE CHAIRMAN MCDONOUGH. I support your "B" recommendation as well, Mr. Chairman. In my view, the right thing to do clearly is to remain very much on alert and not tie our hands in either direction. So, I think the correct policy is no change and symmetry.

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. I strongly support "B" symmetric as the best policy at the moment.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Mr. Chairman, I continue respectfully to think that the dominant risks are on the upside. What worries me is that if these risks are verified as we go forward, we will indeed get what you referred to a minute ago as a stark demand situation where we do not have very many good choices. So, I still favor alternative "C" for whatever that is worth. If we do not adopt that alternative, it strikes me--given the continued very strong incoming data--that the Committee might consider moving to asymmetry toward tightness.

CHAIRMAN GREENSPAN. Governor Kelley.

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

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, I certainly support the recommendation for leaving the funds rate unchanged. But I must admit that I am still impressed by the fact that we do not see any signs whatsoever of a slowdown in the domestic expansion. This combined with the fact that we have such tight labor markets suggests to me that asymmetry in the direction of higher rates is the proper position.

CHAIRMAN GREENSPAN. President Moskow.

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

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Mr. Chairman, I support your recommendation. I want to say a word about what I think a symmetric directive means. Sometimes, one thinks of it as meaning that there is an equal probability that the next policy move might be up or down. I do believe, given the tight labor markets and the continuing strength of demand, that the next move still is more likely to be up--that there is that upside risk. On the other hand, I think a symmetric directive signals our readiness to respond rapidly to a sharper downdrift from Asia than we foresee in the baseline forecast.

I also want to come back and mention something about the longer-run simulations. It seems to me that the two-day meetings we have twice a year are an opportunity to think about some of the longer-range strategic issues facing monetary policy rather than always focusing meeting by meeting on just one decision. In my view, that is the value of the simulations of alternative policy strategies that the staff has presented to us. In those simulations they considered, for example, a couple of options for longer-term monetary policy--either to stabilize inflation at 2 percent or to reduce it further to, say, 1 percent for the PCE. As I read that, the question occurred to me, why do we make the staff guess at our longer-range inflation target? One of the reasons might be that we are uncertain ourselves about our long-range inflation target because of issues relating to the perils of deflation. Do we want to center our inflation target in the long run on true zero inflation so that a typical recession would always be accompanied by deflation? I'm not sure. Is a little deflation worse than a little inflation? Maybe, but I'm not sure about that either. I would like to encourage the staff to think more about these issues, give us some guidance about them, and perhaps devote some of their simulations to them. We might then set aside some time at the next two-day meeting in July to focus on those issues.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Mr. Chairman, I support your recommendation. Yesterday, I spoke a bit about risks and the fact that we are risk takers. I think we are taking reasonable risks by waiting to see exactly what happens. We need time to observe the strength of the factors that will be exerting an impact on both sides of the economy. The other comment I would like to make to explain why I support your recommendation relates to a topic that does not come up much at these meetings, namely, communications. We seem to have gotten ourselves in a position of having an implicit contract to communicate with financial markets. All we have communicated thus far is a great deal of balance. Given what we have communicated and our implicit contract, I think it is appropriate for us to retain the balanced approach that we adopted at the last meeting. It may be that we did not intend to have this implicit contract, but I believe it is there now and we have to live with it.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. I agree with your recommendation as well. I also want to endorse the comments made by President Broaddus and Governor Meyer. They were implicit in some of Don Kohn's comments as well. Now that inflation has come down a good deal, I think it is important that we focus more specifically on what we view as our price objective. I say that not only because it may help us to communicate to the public what we are trying to do, but I believe it will help the inner workings of the Committee over time. So, I would agree that we should spend some time on that issue in July.

CHAIRMAN GREENSPAN. Of course, what has happened to us is that the cost of lowering inflation that we always presumed to be negative has turned out to be positive. We have been given a bonus that we did not earn. The question is, do we make good use of it or do we dissipate it? That may well be the usefulness of trying to focus on where we want to go and what we should do from here. I think the issues raised in our earlier discussions of the nature of prices and where we are in relation to price stability are becoming quite important, especially if Al Broaddus turns out to be more cautious than he needs to be and the Asian crisis has a more deflationary effect on our economy than we now anticipate. President Minehan.

MS. MINEHAN. I very much favor your recommendation, Mr. Chairman. I agree it would be useful to revisit our discussions about inflation even though we have had many of them without coming to any hard conclusions. Maybe it will be more productive this time in the sense that we will have a longer period of low inflation to observe. Perhaps we can derive more information about the real tradeoffs from that experience.

I am a little nervous about this notion of being forward-looking. Do we still know how to do it? Do we know enough with enough confidence to be able to say that we need to tighten policy when we are not observing any real inflation, or that we need to ease policy when we are not seeing any real deflation? You emphasized that there is a premium on quick movement, and I think there is. I believe that we need to be forward-looking. I wish I understood better how to do it.

CHAIRMAN GREENSPAN. We have to be careful. The preemptive move that we made in early 1994 occurred on one of those very rare occasions when we could actually see that the funds rate was fundamentally out of line and it was dangerous to keep it there. We did not know to what level the funds rate ultimately would need to go, but we knew the direction was up. It is going to be very difficult to find situations such as that in early 1994 in which we can take action with the same degree of confidence.

MS. MINEHAN. That is my worry.

CHAIRMAN GREENSPAN. It is one thing to say that in principle we are going to be preemptive. Having done so successfully, we may be tempted to say that this is like shooting fish in a barrel. The trouble, unfortunately, is that the barrel is a large ocean and the fish are minnows! [Laughter]

MS. MINEHAN. Yes, exactly!

CHAIRMAN GREENSPAN. Governor Phillips.

MS. PHILLIPS. I support your recommendation of "B" symmetric.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. I, too, support "B" symmetric.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, I support your recommendation. I think it is interesting that we are in a period when we are benefiting from a productivity supply shock and wondering if it is wearing off, and at the same time we are waiting for a demand shock from Asia and wondering how hard it is going to hit the economy. I think that describes our situation and it tells us to "wait and see" and that symmetry is right.

CHAIRMAN GREENSPAN. President Guynn.

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

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. With the obvious advantage of some hindsight, I now think the thrust of monetary policy in 1997 was more expansionary than I thought at the time, and it became progressively more expansionary as we went through the year. There is an irony in the way we now look at the numbers and also in how we communicate them. A favorable productivity shock or surprise has meant that the real rate of return on capital was higher ex post than we had anticipated ex ante and that relative or nominal interest rates, especially the overnight interbank rate, turned out to be lower ex post than we had expected ex ante. This manifests itself in what we see happening in the financial industry, the banking industry, and in various measures of money and credit growth. The irony is that the way a favorable productivity shock is reported implies not only that real incomes are higher than they would otherwise have been, which is certainly a desirable outcome, but it also is manifested in the form of a lower level of measured price inflation than would otherwise have occurred. Therefore, the change over a short interval in indices like the consumer price index makes it appear that we have higher real interest rates, for a given level of nominal rates, when in fact our theory tells us it was the opposite. We had lower real interest rates.

There is no question about the direction of the effects of the Asian influence. In the statistics, exports will be lower than they otherwise would have been, but I am not sure what that level would have been. Imports will be greater than they otherwise would have been. In an arithmetic sense, those two developments tell us on the basis of partial analysis that GDP is going to be smaller than it otherwise would have been. But that is not a full general equilibrium effect. Lower prices of both imported goods and domestic goods that compete with imports mean that incomes are higher than they otherwise would have been. I now think that we would have been looking at even stronger nominal demand growth coming into this year, fueled by rapid money growth. We may benefit by some amount--I'm uncertain about the amount--of less strong demand than we would have experienced in the absence of the Asian developments, but I am not at all convinced that demand is actually going to decline or that the rate of economic growth is going to be slower than is reflected in the Greenbook.

So, I think the odds are strongly in the direction that our next move will be to raise the funds rate to slow the growth of money and credit. We are going to see a substantial acceleration of prices even if it is somewhat delayed.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Mr. Chairman, I support your recommendation of "B" with symmetry. Just to make a few points about it, the risks are large on either side, but they are very different and they are very hard to figure out. So, it is difficult for us to be preemptive right now, but that is fine and I agree that we should wait and see. I think, however, that we should tell ourselves that once these risks are clarified, we may have to act quite forcefully. The fact that we are not acting now may in a sense be increasing the burden on us to act forcefully in the future if we can figure out what these risks are, and we may as soon as new numbers come out.

My last comment relates to Governor Meyer's suggestion that we have a debate about our price stability targets. I think it is always a good idea to have debates, but I believe it is going to be hard to have a productive debate. One reason, as our previous discussion indicated, is that we probably all have slightly different notions of what we mean by price stability. We certainly have very different operational notions about whether we should look at this index or that index, adjusted this way or that way, and about relative prices or absolute prices. It probably is always desirable to go through the discipline of discussing such an issue, but it is going to be a very hard issue for us to resolve.

CHAIRMAN GREENSPAN. First Vice President Rives.

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

CHAIRMAN GREENSPAN. Let's have a roll call on "B" symmetric.

MR. BERNARD. The wording is on page 21 of the Bluebook, starting at the bottom of the page: "In the implementation of policy for the immediate future, the Committee seeks conditions in reserve markets consistent with maintaining the federal funds rate at an average of around 5½ percent. In the context of the Committee's long-run objectives for price stability and sustainable economic growth, and giving careful consideration to economic, financial, and monetary developments, a slightly higher federal funds rate or a slightly lower federal funds rate might be acceptable in the intermeeting period. The contemplated reserve conditions are expected to be consisted with some moderation in growth of M2 and M3 over coming months."

CHAIRMAN GREENSPAN. Call the roll.

MR. BERNARD.

Chairman Greenspan	Yes
Vice Chairman McDonough	Yes
Governor Ferguson	Yes
Governor Gramlich	Yes
President Hoenig	Yes
President Jordan	Yes
Governor Kelley	Yes
President McTeer	Yes
Governor Meyer	Yes
President Minehan	Yes
Governor Phillips	Yes
Governor Rivlin	Yes

CHAIRMAN GREENSPAN. Our next meeting is on March 31. As I indicated yesterday, revisions to forecasts are due to Mike Prell by Monday, February 9.

END OF MEETING