Meeting of the Federal Open Market Committee

June 29-30, 1999

A meeting of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington, D.C., on Tuesday, June 29, 1999, at 2:30 p.m. and continued on Wednesday, June 30, 1999, at 9:00 a.m.

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

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

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

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

Messrs. Alexander, Cecchetti, Hooper, Hunter, Lang, Lindsey, Rolnick, Rosenblum,1/ Slifman, and Stockton, Associate Economists

Mr. Fisher, Manager, System Open Market Account

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

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

---

1/ Attended Tuesday's session only.

Messrs. Porter 2/ and Reinhart, Deputy Associate Directors, Division of Monetary Affairs, Board of Governors

Mr. Reifschneider, 2/ Section Chief, Division of Research and Statistics, Board of Governors

Mses. Edwards 3/ and Mauskopf 3/ and Messrs. Lebow 2/ and Orphanides, 2/ Senior Economists, Divisions of Monetary Affairs, International Finance, Research and Statistics, and Monetary Affairs respectively, Board of Governors

Ms. Garrett and Mr. Tetlow, 2/ Economists, Divisions of Monetary Affairs and Research and Statistics respectively, Board of Governors

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

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

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

Mr. Fuhrer and Ms. Perelmuter, Vice Presidents, Federal Reserve Banks of Boston and New York respectively

---

2/ Attended portion of the meeting relating to the discussion of the policy implications of uncertainty about key economic variables.
3/ Attended portions of the meeting relating to the Committee's review of the economic outlook and consideration of its monetary and debt ranges for 1999 and 2000.

Transcript of Federal Open Market Committee Meeting of
June 29-30, 1999

Tuesday, June 29--Afternoon Session

CHAIRMAN GREENSPAN. Good afternoon, everyone. Would somebody like to move approval of the minutes of the May 18 meeting?

VICE CHAIRMAN MCDONOUGH. So move.

CHAIRMAN GREENSPAN. Without objection. Mr. Fisher.

MR. FISHER. Thank you, Mr. Chairman. I will be referring to the usual package of colored charts that is in front of you. [1]/

> Mr. Chairman and members of the Committee, four perceptions are currently influencing financial market behavior. It seems to me that each of these perceptions contains certain elements of truth but also, I fear, certain fallacies that could come back to haunt us. These perceptions are: First, that signs of a pickup in European growth are causing a rise in expectations for a European Central Bank (ECB) rate hike later this year; second, that the strength of the U.S. economy has been the major factor causing the weakening of the euro over the last six months; third, that the Japanese monetary authorities can be relied upon to stabilize the yen with verbal and official intervention; and fourth, that the levels of interest rates and of economic activity in the United States will be principally determined by the words and deeds of the members of the Federal Open Market Committee. In my remarks, I will address each of these perceptions in turn.
>
> In the charts on the first page of the package, you can see that the forward rates jumped a bit on the Committee's announcement on May 18 but stabilized or even rallied a bit until May 27 and then began to back up through most of June. I will return to the issue of the course of U.S. interest rates later when I discuss the bond market.
>
> For now, I would like to focus on the euro forward rates, which appear to have followed U.S. rates up. Euro-area 6-month and 9-month forward 3-month deposit rates are up 25 basis points or so since your last meeting. There have been a number of positive signs for the euro-11 economy, including greater-than-expected first-quarter GDP in Germany, increased German manufacturing orders, and improvement in German and French business sentiment. But some less upbeat data have also been reported in Europe, including an increase in German unemployment in May, a decrease in German retail sales in April, weak French exports in

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

April, and weak Italian production in April. So, while some signs of a bottoming in the European economy have emerged, I don't think that translates directly into concrete expectations of an ECB rate hike. Rather, evidence of a slight pickup in activity coupled with strong expectations for U.S. rate increases, against the backdrop of a weak euro, have completely eliminated any expectations of further rate cuts by the ECB and in that sense have increased the risks of a rate hike.

But this has left euro-area interest rate markets without any direction, leaving them highly susceptible to being dragged around by the movement in U.S. rates. Unfortunately, I did not include in these charts a panel on the German yield curve. But in the period since your last meeting the 10-year German bund and, most surprisingly, the 2-year German bund have marched along with our yield curve almost in lock step as they too have backed up over the last 60 days. It may turn out that the euro-area economy has turned and will pick up steam from this point forward, but most of the backup in euro-area interest rates appears to me to be a case of their following our lead.

In the bottom panel of this chart, which depicts Japanese forward rates, you can see that the 9-month forward 3-month rate backed up following the report of a much stronger-than-expected GDP number for the first quarter. Then, it seems to me, the data go berserk in this panel. Even though we have checked and doubled checked them, this is the best we have been able to come up with. But you should also recognize that this scale is twice that of the other panels on this chart in order to provide any view at all of Japanese interest rates. There is a level of noise in the Japanese markets that I don't even pretend to understand. But I will hold with my assessment that I don't think anyone really expects the Bank of Japan to raise rates any time soon. There is much seesawing in views about what to expect in the Tankan survey. Every few days authorities step forward to say they still think the economy is weak, and this has been going on for some time.

Turning to the next chart, the steady weakening of the euro against the dollar since its launch in January has been widely attributed to the surprising strength of the U.S. economy. Obviously, the relative strength of the U.S. economy versus the European economies has played a role in the movements of the dollar against the euro but it does not explain the weakness of the euro against the yen. It strikes me that if one wants to make the case that Europe's growth differential with the United States has been the principal cause of the euro's weakness, one needs to look at the relationships among all three currencies. If one does that, I think it is evident that the yen has been playing a dominant role, both in the last six months and over the last two years.

In the third page of charts, the top panel presents a view of G-3 exchange rates from the dollar's perspective, depicting the value since January of 1997 of one dollar in terms of the euro in red and the value of one dollar in terms of the yen divided by one hundred in green. The bottom panel provides a view of exchange rates from the yen's perspective, depicting the value of one hundred yen in dollars, the green line, and the value of 100 yen in euros, the blue line.

With the naked eye I think you can see that the yen-based pair in the bottom panel track each other much more closely than the dollar-based pair in the top panel. Comparing the correlation coefficients noted in the subperiods in the top and bottom panels, you can see that the only period in which the daily changes of the dollar pair tracked more closely was from January through April of 1997. From May 1997 onward, when the unwinding of the yen carry trades began to put pressure on the Thai baht, the daily changes in the yen pair have correlated much more closely.

Now, neither of these graphs nor the correlations is proof that the yen is the principal driver of the G-3 exchange rates. But I do think the data powerfully suggest that the differences between North America on the one hand and Europe on the other are much less significant than the differences, as expressed in exchange rates, between Japan on the one hand and North America and Europe on the other.

If euro/yen and dollar/yen are moving to the beat of one drum, there is only so much room left for independent expression in the euro/dollar exchange rate. Again, I certainly believe that differences in growth prospects between the United States and the euro-11 influence the euro/dollar exchange rate. But I also think that the weak Japanese economy and the crippled Japanese financial system have had an oscillating influence on portfolio allocations that in turn have had a significant impact on the major exchange rates--an impact that has been ignored by those who do not take the time to consider all three sides of the triangle.

Turning to the fourth page of charts, the top panel depicts euro/yen and dollar/yen exchange rates as they have traded since the start of the year. The bottom panel shows the implied volatilities of one-month options on all three of the major currency pairs since the start of the year.

Now, the third perception I mentioned at the outset was that the Japanese authorities can be relied upon to stabilize the yen with verbal and official intervention. The germ of truth in that perception is that the Japanese authorities have stabilized the yen so far this year, at least to some appearances. The problem is that the market's apparent reliance on the authorities' ability to do so is likely to be misplaced. On January 12, indicated by the vertical line on the left in the top panel, the Japanese authorities purchased And the shaded area on the right indicates the of dollar intervention and the of euro intervention the Japanese authorities conducted in mid-June.

While there was a modest uptick in the implied volatilities, as shown in the bottom panel, what surprises me is how little and how short-lived that reaction was. Indeed, dollar/yen and euro/yen implied volatilities are back to their lows of the year. Anecdotal evidence from the market suggests strongly that many who have exposures are simply leaving them unhedged and that others are eager to write options and collect premiums, leaving themselves unhedged, all in the expectation that the Japanese authorities will keep the yen contained. It is possible that the yen will stabilize; I don't want to rule that out entirely. But I think it is more likely that the reliance on that expectation will simply delay the position adjustments--or worse, will encourage an entirely new round of yen carry trades.

The fifth page of charts addresses the last perception I mentioned--that the levels of interest rates and of economic activity in the United States will be determined principally by the words and deeds of the members of this Committee. I should, of course, point out that there is an element of truth behind that perception also, particularly with respect to the predictable impact of the Committee's deeds on short-term rates.

Within the last few weeks, in the absence of what we might normally think of as noteworthy data, it seems to me that bond yields have been pushed higher by a medley of unattributed voices. The top panel depicts several stages of the bond market's movements since your last meeting. First, I think it is worth noting that in the days following the Committee's announcement on May 18 the bond market rallied. The long bond rallied every day that week; along the rest of the yield curve other bonds backed up on the day after the announcement but rallied for the rest of the week. Now, in defense of the market, I don't think its initial reaction was unreasonable. After all, the 10-year Treasury had already backed up 50 basis points in yield from early April. I think the market took some pleasure in seeing that the central bank was preparing to react to the perceived risk of inflation but did not plan to do so abruptly or in a knee-jerk fashion. I think it is also worth noting that many market participants interpreted the FOMC's announcement as implying a heightened risk of a 25 basis point increase in rates.

However, beginning on May 27, the market began receiving a series of reports about the views of the Committee, including comments by FOMC members and other Fed officials suggesting that a more aggressive tightening should be expected. This threat, giving the market a new sense of risk, triggered a backup in yields and anxious reactions to several not particularly significant data releases.

On June 1 the long bond backed up 11 basis points after the NAPM prices paid index came in at 55.2 rather than closer to the expected 53.3. On June 4 the bond market backed up only 3 basis points in reaction to the release of the data on employment and average hourly wages; but then on June 11 it backed up 9 basis points after the report of a 1 percent increase in retail sales versus expectations of 0.7 or 0.8 percent. Subsequently, the release of the flat CPI on June 16 and the Chairman's June 17 testimony before the Joint Economic Committee calmed the market with a perception that a moderate tightening was in store. But as you can see on the chart, the "relief rally" was short-lived. By early last week, the market was once again on the receiving end of a chorus of voices threatening more aggressive actions.

In my judgment, if you had tried to trade in the bond market during this period and had followed only the FOMC's announcement on May 18, the data releases as they came out, and the Chairman's Joint Economic Committee testimony, you would have lost a lot of money. On the other hand, if you had subscribed to all the high-priced insider rags and carefully tracked the utterances, attributed and unattributed, of FOMC members, you would have fared a good bit better.

Looking at the bottom two panels on this page, you can see that credit spreads and volatilities did back up a little, but not very much--less than I would have expected, given all the fits and starts in the bond market. I think it is particularly noteworthy that the implied volatility on the S&P futures contract was actually lower on the period.

In sum, there seems to be a very odd mix of anxiety and complacency in this market, which I don't pretend to understand fully nor do I yet see how it will work itself out.

Finally, turning to domestic open market operations, the chart on page 6 depicts the volatility of the fed funds rate. We had significantly less volatility and a much better contained funds market during this period than we had earlier in the year. The red dots cover the intermeeting period and the blue dots cover the period from January 14 through May 18. As you can see, the median value of the effective deviation from the target in absolute terms was only 5 basis points and the standard deviation was down to 8 basis points during the recent intermeeting period. So we have had a much calmer funds market and funds have traded a bit on the soft side.

The rather extraordinary conditions in the current maintenance period have posed something of a challenge for the Desk. The market had a very low appetite for reserves coming into this period, expecting to hold large quantities of excess reserves at the quarter-end. And even as we left reserves quite short, the market traded on the soft side. Last Thursday, as the market began to turn its attention to the shortage for this week, we arranged a 3-day forward RP for settlement Monday to inject about $7 billion to cover these last days.

But given the combination of events tomorrow--a quarter-end, a maintenance period end, and a very high expectation that the Committee will raise rates--it has been rather hard to get the funds rate to trade very far below 5 percent, even though I think we have finally succeeded in that effort today. I will be candid, however; I have some fears that our efforts to do this over a Monday and Tuesday will lead to a fed funds rate of zero by tomorrow night, notwithstanding your announcement, whatever it may be.

I should mention that over the first six months of the year the SOMA portfolio has expanded by almost $30 billion, which is a record expansion of our outright holdings. This has been in response principally to currency in circulation, but we have been adding to the portfolio all along the maturity spectrum. Even with the slightly stronger currency growth, we still think that the normal $12 billion leeway will be adequate for the coming intermeeting period.

Mr. Chairman, we had no foreign exchange operations during the period but I will need the Committee's ratification of our domestic operations. And I would be happy to answer any questions.

CHAIRMAN GREENSPAN. Questions for Peter?

MR. BROADDUS. Just a quick question on your chart discussion, Peter: On the third page where you were talking about the cross rates, I am wondering as I read the portion of the bottom panel covering 1999 whether things may be changing. It looks as if the correlation between dollar/yen and euro/yen is diminishing in relation to what it was in earlier periods. Maybe the opposite is happening in the top panel. Am I looking at that right?

MR. FISHER. Our perception is very much that the daily changes are still being driven by the yen. The anxiety of the Japanese authorities is now as much focused on euro/yen as dollar/yen, and they intervened in euro/yen for the first time ever during this period. I agree with you but I think some other things are going on here; I don't mean to suggest that this encompasses all of the inputs that determine exchange rates. Still, during these six months and even in recent weeks, the daily changes up and down in euro/yen and dollar/yen seem to be moving together. Although I did not refer to this in my remarks, we hear anecdotally that there is a sense among market participants, both in Europe and in Japan, that a lot of the pressure on the yen reflects Japanese investors who had established positions in Europe and are coming back into yen now that they are deeply under water. What you can't tell from this panel, because it is not expressed in terms of exchange rates, is that at the end of September of last year, the end of Japan's fiscal half-year, euro/yen was at 160. Now it is at 124 or so. So, anyone from Japan who took on a position in euro assets at that earlier point is deeply under water. It is actually a widespread perception in Tokyo that the Ministry of Finance's incentive to intervene was to try to help institutional investors get out of those positions without strengthening the yen. So, other things are certainly going on. The sense of the strong U.S. economy vis-à-vis Europe is also certainly apropos.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Peter, I have a question for you or Karen about the huge Japanese support of the yen. Has this intervention been sterilized completely or partially? The numbers are so large that they would have great significance for their monetary base, and I just wondered what the policy is.

MR. FISHER. The normal course that I believe the Bank of Japan is following is that they sterilize this intervention. It is a very complicated arrangement. It's as if the Exchange Stabilization Fund, the equivalent accounting entity, could actually issue its own bills to the market to finance itself. That's in effect what the Bank of Japan does on behalf of the Ministry. So in the first step, the Bank of Japan gives the Ministry yen liquidity. But the Ministry then has to finance that by borrowing yen in the markets and issuing securities directly to repay the Bank of Japan; it would be the accounting equivalent of the Exchange Stabilization Fund issuing its own bills directly. So it is sterilized. I think that question is different from the question of the extent of accommodation in the Bank of Japan's monetary stance. It is still a very accommodative stance. They have managed to keep their overnight rate trading at 2 or 3 basis points, which is the brokers' spread. So that rate has been effectively zero throughout the period.

MS. JOHNSON. I think that “zero” is the magic word. Whatever intervention the Bank of Japan chooses to do, whether it is in domestic assets or in foreign exchange--and the latter is what they have been doing--they no longer have room on the downside at the very short-term end of the money market to lower interest rates any further. So in that sense there is no such thing as unsterilized intervention because there is no place to go. There are lots of people out there arguing about whether or not allowing the monetary base to continue to expand under those circumstances has expansionary influences, and through what channels. We are obviously looking for the latter in Japan. But in the most ordinary sense of sterilized and unsterilized intervention, both in terms of what happened on the balance sheet and whether it did or did not affect short-term money market interest rates, the answer would be that they have sterilized.

MR. PARRY. That is rather interesting because, of course, we often think about sterilization not necessarily in terms of the impact on rates but on the monetary base.

MS. JOHNSON. At this point, the change in the Japanese monetary base doesn’t seem to be having any particular implications. At least changes of this order of magnitude can’t be perceived as being followed by changes, for example, in better lending conditions and increased bank credit creation.

CHAIRMAN GREENSPAN. I think it is instructive that the Japanese are creating what essentially are very useful experiments in intervention, whether we call it sterilized or otherwise. As you may recall, they sold in U.S. dollars and bought yen a while back with very modest, if any, effects. They have done the reverse this time, except they have added another or so in euro, with little effect. Many economists would argue theoretically that sterilized intervention cannot affect exchange rates materially. What the Japanese have succeeded in doing is proving that proposition. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Peter, considering that the earlier version of the yen carry trade contributed so dangerously to the Thai baht explosion in July 1997, are you and your colleagues at other central banks able to track reasonably well the buildup of that so we can take any supervisory action that is appropriate?

MR. FISHER. At the aggregate level, it is quite hard; the data are rather poor. At the firm level, I presume one can find out what decisions individual firms have made. Tracking this involves relying on anecdotal information. There was an attempt to tabulate some data for Japan, which was not very satisfactory. The results were published by some outfit here in Washington whose name I don't recall, but the data were pretty poor once you scratched the surface. When I checked with the Bank of Japan, they told us to be very suspicious of those data. So unfortunately, the answer is no, we cannot track that at an aggregate level. But it is something we are always talking about with others in the market and we get some anecdotal information. I don't know how accurate that is.

VICE CHAIRMAN MCDONOUGH. So some supervisory sniffing around might be appropriate?

MR. FISHER. Yes, it is certainly easier to try to get a handle on it at the firm level.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Peter, I think you have gotten a little too subtle for me and I am not sure I'm following you. Why did you choose to focus on this issue of whether it is a yen thing or a dollar phenomenon? What significance do you think that has for the Committee?

MR. FISHER. I am worried about the risk that people perceive it as a dollar thing when in fact I think it is a yen thing. I think sloppy policies, sloppy policy reactions, and uninformed market behavior can result if people think they are responding to one stimulus when that stimulus really isn't the dominant one. So my first instinct is to make sure my thinking is as clear as I can make it regarding what may be influencing exchange rates. That is really the major thrust of my message, nothing more than that.

MR. MCTEER. Did Japan ever intervene with marks?

MR. FISHER. No, they did not. They hold a few marks but I don't believe they ever formally intervened in marks.

MR.MCTEER. So this could be the beginning of the euro as an intervention currency? This is the first time it was ever used that way?

MR. FISHER. It was the first time it was used by the Japanese. I think it reflected a certain flamboyance on the part of the Ministry of Finance, trying to grab attention for itself in Tokyo. But also, to be fair, a lot of the pressures were emanating from the movement in euro/yen. So to the extent they wanted to respond, they realized that if they only intervened in dollar/yen, it would be a release valve and would be hard to get their hands on the problem. So there was a tactical reason, but I think flamboyance might also have been a reason.

I was very surprised to see the ECB begin a relationship by intervening as agent on behalf of the Japanese authorities because the Bundesbank had always resisted doing that.

I should be clear that this normal courtesy may increasingly become something of an artifact since most of the foreign exchange market trades through a single computer, or at least the price setting takes place in the electronic brokering system (EBS) terminal. So liquidity is not a geographic phenomenon; it is a temporal phenomenon of when people are connected to and are watching the EBS. So we may get away from this notion of geographic intervention, but that hasn't quite happened yet.

MR. MCTEER. I believe your fourth point was that people seem to be reacting to rhetoric more than to the statistics. What was the significance of bringing that to our attention?

MR. FISHER. I think the bond market has been focused on the words of members of this Committee, both for attribution and not, to an extent that I have not seen in my admittedly not very long tenure in this position. I find that disturbing in terms of the influence on policy. It looks to me as if this bond market has priced in a 25 basis point move about four times. I can't prove that and I don't know that.

MR. MCTEER. Cumulatively?

MR. FISHER. They have taken that 25 basis point increase in and out. I am not suggesting that that has any profound macroeconomic effect. But the in and out pricing repetitions have been in response to the rhetoric, not the economic data. That was my point.

MR. MCTEER. Do you think the announcement of the bias in the directive is part of this?

MR. FISHER. Clearly something very different happened after the last meeting with the announcement of a bias. I said at the end of my remarks that there is a strange mix of what market players are anxious about and what they are complacent about. I looked for a way to express to the Committee what I thought they were anxious about and what I thought they were complacent about. I think their focus is misplaced but, to be candid, I can't quite put my finger on it. They seem to have some expectation that words from this Committee, whether individually or collectively, will somehow remove all the uncertainties. That is rather naïve and myopic. But they hang on every word as if it were going to solve the uncertainties for them. I just don't think it will. Indeed, it hasn't, as you can see by how the bond market has behaved. So if I was not clear enough, I hope that helps.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Some of the initial commentary I saw after the announcement by the Japanese in early June of their first-quarter number was along the lines that it was a statistical fluke or window-dressing. The view was that it wasn't real and that by year-end we would see the Japanese economy back in the tank again. A fair amount of the commentary had the tone of: "This is something we did not forecast so it couldn't possibly be true." More recently, I have seen more commentaries suggesting that the first quarter may have represented a turning point, though the GDP number may be exaggerated, and that from this point forward Japan would be viewed as having seen the worst. Is there any dominance of one opinion or the other in the street?

MR. FISHER. I certainly defer to Karen for a view on the real merits of what you've suggested. In terms of the view on the Street, I think most non-Japanese observers are still highly skeptical. They are not yet in the camp that thinks this is for real, although they are intrigued and are wondering where the opportunities may be. After all, the Nikkei turned up. So there is a little bait-on-the-hook dangling there for them. I think the Japanese are quite anxious and wondering if it is time to bring their money home. The quantities do not matter, but the price should. So in Tokyo there is a lot of anxiety about that. There also is a lot of anxiety about what the impact on Japan might be of any action by this Committee. It doesn't make any sense to me, but they think that if this Committee raises rates, it will strengthen the yen. And that actually is an issue within Japan as well. So I think the anxieties about this being a turning point are somewhat geographically separated, if I can put it that way. But if Karen wants to add anything on the specifics--

MS. JOHNSON. I will defer my comments on that until after the Chart Show, since we are going to go into some of those issues as we return to honest-to-goodness real economics! [Laughter]

CHAIRMAN GREENSPAN. Any further questions for Peter? If not, would somebody like to move to ratify the transactions?

VICE CHAIRMAN MCDONOUGH. Move approval of the domestic open market operations.

CHAIRMAN GREENSPAN. Without objection. Let's move on to the Chart Show. Mike Prell.

MR. PRELL. I don't know how real the economics are, but there are tangible charts to which we will be referring. [2]/

> I thought I'd begin with a brief update on the second quarter, taking into account a few data we've received since the Greenbook was completed.
>
> As usual at this point, we're still attempting to blend the labor market data with the expenditure figures to get a fix on current-quarter GDP. The relationship is loose, but the weaker growth of production worker hours in April and May, shown in the upper left panel of Chart 1, suggests that we should look for a moderation of real output growth this quarter. Considering the spending numbers as well, our best guess for the real GDP increase is still about 3 percent.
>
> Yesterday's report on consumer spending for May contained no major surprises. Anticipating a moderate increase in June, we see real PCE this quarter running something over 4 percent--off markedly from the 6¾ percent first-quarter pace.
>
> Housing starts, at the middle left, fell off considerably on average in April and May--we think mainly because of limited supplies of labor and materials, rather than any shortage of demand. Owing to the lags between

---

[2]/ A copy of the material used by Mr. Prell and Ms. Johnson is appended to the transcript. (Appendix 2)

starts and construction outlays, real residential investment probably will be up, but only modestly, this quarter.

As plotted at the right, last week's advance report from manufacturers showed that shipments of non-defense capital goods, excluding aircraft, were strong through May. This reinforces our view that there will be a hefty increase in PDE this quarter, although various anecdotes and the NAPM survey would suggest that some of the rise in shipments of capital goods might show up in export sales.

In that regard, the panel at the lower left shows that overall exports firmed in April. Even so, the trade gap still was somewhat larger than the first-quarter average, as we continued to exhibit an enormous appetite for imports.

Turning to the right panel, it would appear that few of those imports ended up in business inventories in April. The book value of manufacturing and trade stocks, ex motor vehicles, rose only modestly--roughly matching the first-quarter rate of accumulation.

All told, then, the picture is one of a step-down in GDP growth this quarter. But final demand can scarcely be said to have turned weak--and inventories probably are lean enough that desires to build stocks will spur production in coming months.

With that prelude, let me turn to the summary of the staff forecast, contained in Chart 2. As has been the case for a long time now, we are projecting a considerable moderation in the trend of real GDP growth. The quarterly numbers represented by the bars in the upper left panel gyrate later this year and in early 2000 because of our allowance for some Y2K effects, but the general drift is toward a slightly sub-par growth trend. Being just slightly sub-par, though, that growth probably would be sufficient to hold the unemployment rate in the low 4s through next year.

Largely, but not solely, because of the continued tightness of the labor market, we're expecting that the rate of inflation will trend higher, as may be seen in the bottom panels. The recent rebound in crude oil prices generates an acceleration of the overall CPI to a 2¼ percent increase this year; a leveling of oil prices holds total CPI inflation at the same average pace in 2000 even as the core component accelerates. The acceleration in overall GDP prices is smoother, because the direct oil price effects on this index are smaller.

As we emphasized in the Greenbook, the stock market outlook--the subject of the next chart--is quite central to our forecast. With the "drag" from the external sector likely to be diminishing, the projected moderation of GDP growth hinges on a substantial slackening in the growth of domestic demand. The half percentage point funds rate increase we've assumed to occur in the next several months and the sustained higher level of intermediate- and long-term interest rates should work in that direction. However, a cessation of the uptrend in share prices is an important ingredient as well, and whether that is indeed at hand is open to question.

The top left panel updates the provocative comparison of the 1920s and 1990s bull markets that I included in the last chart show. We're still pretty much on track, with some upside ahead of us. Certainly, the fact that the market has given up so little ground in the recent period of interest rate run-up is testament to the abiding exuberance of investors.

That point is given further emphasis by the right panel, which shows the current extraordinary narrowness of the equity premium, as proxied by the gap between the earnings yield on the S&P 500, based on analysts' profit expectations for the coming twelve months, and the real 10-year Treasury rate.

The middle panels plotting price-earnings multiples alone are perhaps less insightful analytically--but may still be of some interest. The left panel in particular illustrates that the run-up in PEs has been unusual in that it has occurred at a time so distant from a cyclical trough in profits.

Together, as we've suggested repeatedly--and evidently wrongly--these indicators would seem to suggest that the market could be vulnerable to a quite sizable decline, if and as rosy corporate profit expectations are disappointed. Nonetheless, we've projected only a flattening in share prices. That still produces the decline in the household wealth-income ratio charted in the lower left panel, however, which should help take the steam out of consumer demand.

The little table at the right is intended to highlight the relative potency of stock market effects today. Because of the huge run-up in the wealth-income ratio since the end of 1994, a given percentage change in share prices translates into a much greater consumption effect than before. As indicated, when we apply our standard rule of thumb to a 10 percent decline in share prices, the effect on real PCE growth in the ensuing year is now 0.4 percent, twice what it was earlier.

In the Greenbook, we simulated a rapid 25 percent decline in the market, which had notable but not devastating effects on the growth of activity. Looking at the panels above, one might be able to envision a much deeper bear market. But, even with the simulation we performed, it might be asked whether there could not be greater effects on demand than predicted because of financial imbalances that our model cannot capture.

This is no simple matter to pin down, but Chart 4 provides a few clues. First, the upper panel tends to allay one concern. Although the volume of margin debt outstanding has skyrocketed, when scaled by the value of equities, as it is here, it doesn't look so startling.

However, this is a very narrow measure of leveraging and consequent risk exposure. The right panel shows two aggregate ratios of households' indebtedness to their holdings of liquid assets. The black line reveals that debt has been rising considerably relative to holdings of the most liquid of financial assets--deposits, money funds, and governments. But the red line indicates that debt has been falling relative to a broader range of assets that comprises as well corporate and municipal securities and mutual funds. So, there's not much sign here that even though debt has been growing appreciably faster than income, household balance sheets in the aggregate have become more illiquid.

Is there something lurking out there at a disaggregated level that might imply a different assessment? We've generated some preliminary tabulations from the 1998 Survey of Consumer Finances to address that issue, and these are laid out in the middle panels. I'd note on the left panel that there's been a considerable shift in the distribution of household debt from those without stock (a smaller portion of the population today) to those who have significant amounts of stock--defined in the second column as a holding equal to at least one-half year's income.

But, if shareholders have taken on a larger amount of debt, they've not incurred extraordinary debt-service burdens. As indicated in the second column of the right panel, the median monthly payment burden as a percent of income for significant shareholders has increased, but it is somewhere between the ratios for households with smaller or no shareholdings. I should add the caveat that the income concept in these ratios often includes realized capital gains, which might suggest the possibility of some greater exposure for the shareholding households, but another fact is that the significant shareholders also have relatively large amounts of other assets. Thus, even if one were to assume a very deep drop in the stock market, it would not generally have drastic effects on their ability to cover their debts.

The bottom panels focus on another conceivable point of vulnerability, the banking system. As you can see at the left, the black line indicates that almost all banking assets are held by institutions that are well capitalized. The comfort one might draw from that fact today is perhaps a little less than would have been the case a couple of years ago, however, because--as shown by the red line--the margin by which the banks exceed their regulatory capital requirements has shrunk a bit.

If one were to think about how the banking system might be affected by a stock market plunge, at least one can rule out the more direct links that proved devastating in Japan when their bubble burst. Having consulted with our supervisory folks, it appears that the greatest concern might be that loans have been made to firms that have engaged in aggressively priced acquisitions, with the expectation that those loans will be repaid out of proceeds of subsequent stock or junk bond issues. The junk bond market looks better today than it did last fall, as reflected in the yield spread at the right; but with defaults already rising the spreads have remained appreciable. A broad retrenchment in stock prices might cause an edgy junk market to turn very sour and leave banks with either losses or impaired assets that would in turn make them more cautious lenders. My sense though, is that--short of a severe market setback--we are not talking about financial dislocations of such a scope and intensity that we need to mark up the customary wealth and cost-of-capital effects substantially.

The kinds of pressures financial markets will face obviously will depend considerably on the amount of inflation that lies ahead. Chart 5 summarizes the labor market forces impinging on wages. Our forecast of labor demand is premised on what is, relative to prevailing professional norms, a pretty optimistic assessment of the dimension of recent and prospective structural gains in labor productivity. As you can see in the top panel, however, we're expecting that growth in output per hour will slow in the near term, not because the structural improvements will ebb, but because we expect that hiring won't be geared down immediately and commensurately as production decelerates.

In any event, we don't foresee much relief from the labor market tightness. The labor force participation rate, plotted in the middle left panel, has been fluctuating in an essentially sideways direction for a while, after having risen a bit as people perhaps were drawn into the workforce partly by the perception that jobs were readily available. As indicated at the right, the percentage of respondents to the Conference Board survey who say that jobs are easy to get seems to be leveling out, and we're expecting labor force participation to remain in the recent range.

In this tight labor market, workers have achieved some leverage in the wage-setting process, and we're forecasting that compensation increases, plotted at the lower left, will be tending to grow. We believe that we were probably correct in expecting that the low rate of price inflation in the past year or two would be moderating nominal wage increases, but the first-quarter fall-off in the ECI measure of compensation looks too low to believe. In fact, doing some rethinking, partly in light of other information that has come in of late, we have moved our ECI forecast back up noticeably this time, after having initially dropped it quite markedly in response to the first-quarter surprise. But, the basic point, conveyed in the forecasts of both the ECI and the Productivity and Costs series for hourly compensation, is that tight labor markets--with a helping hand from Uncle Sam on the minimum wage front--are likely to produce ongoing large real pay increases.

The right panel documents the real compensation gains in the forecast, responding in part to questions that have arisen at past meetings. I've based this on the Productivity and Costs series in part because it relates more directly to the movements in income shares in the NIPAs. The point that is highlighted here is that, though the projected real pay gains may look rather skimpy relative to productivity trends when they are measured against consumer prices, when they're measured against product prices they are quite sizable. Workers have been capturing a bigger share of the pie.

This spells a squeeze on profit margins--unless businesses can find some leverage of their own on the pricing side. We don't think that they will do so, but there are some risks. As you can see in the top panel of the next chart, we have core consumer prices accelerating over the next year and a half. This reflects in part the labor cost pressures I've just described. In addition, there will be some pass-through into core prices of the rebound in oil prices via higher transportation costs and other channels.

The middle left panel highlights another unfavorable factor--namely, the turn that is likely to occur in non-oil import prices as the dollar peaks and foreign economies manage to generate more domestic demand for their output. One can already observe that import price trends have become somewhat less favorable than they were earlier, with a rise in materials prices being a significant element in that pattern.

Looking for signs of whether the tide might be turning in domestic prices, one indicator that people sometimes consult as a measure of so-called "pipeline" inflation is the PPI core intermediate component, graphed at the right. These prices don't bulk large in terms of their weight in overall production costs, but they can be an early indicator of broader inflationary pressures. They've probably now posted their first quarterly increase since 1997. Some of this is metals prices, which rallied in part on Asian growth prospects; some of it is the effect of higher petroleum feedstock costs; and some of it is the pressures on capacity in the construction materials industry. These don't quite smell like a broad-based inflationary surge, though. Moreover, the below-average overall factory utilization rate in our forecast, shown at the lower left, suggests that, although competitive pressures from abroad may ease a bit, a major flare-up in goods price inflation is not in the immediate offing.

There have been some comments in Reserve Bank reports that consumers have become somewhat less price conscious. This might suggest some shift in inflation expectations. The final panel shows the Michigan SRC median readings on 1 year and 5-to-10 year expectations. On the moving average basis plotted here to filter out some of the noise, both series are off their lows, but whether the downtrends of the past several years are in process of reversing is not clear. A sanguine--and quite plausible--interpretation would be that expectations were damped to an extra degree last year by the plunge in energy prices and that we have seen a one-time adjustment back up in light of the recent rebound in those prices. The pattern here is not dissimilar to those in the charts of the price series themselves: In neither case is the direction unambiguous and as a result they perhaps serve best as a sort of Rorschach test for one's degree of inflation phobia.

Karen will now discuss the international picture.

MS. JOHNSON. The general tone of developments abroad since the February chart show has been favorable. On balance, the repercussions of the spread of the global financial crisis to Latin America have not been as dire as we feared in February; signs of recovery in Asia have added to the sense that the crisis, as such, is at or near its end. Nevertheless, there is no lack of risks embedded in the current foreign outlook.

A major element of the more sanguine outlook for the rest of the world is the perception that various financial market indicators are signaling progress in the real economy. Chart 7 shows selected real exchange rates and stock market indexes.

The top pair refer to the major industrial countries. The black line on the left panel shows that on balance during 1999 the dollar has risen in real terms relative to an average of the major foreign currencies. In large part, that rise reflects the strengthening of the dollar relative to the euro (the blue line). The dollar has also risen on balance in real terms against the Japanese yen during 1999, but it remains far below the value it had reached in the middle of last year. In the forecast, we expect a gradual depreciation of the dollar in real terms against these currencies, as relative macroeconomic conditions become less supportive of the dollar and as market participants become more aware of the growing U.S. external imbalance--a topic to which I shall return at the end of my remarks.

Stock prices for these countries, on the right, are among the financial indicators signaling optimism during the past several months. Although they declined sharply last August and September during the turmoil following the Russian debt moratorium, they have increased on balance so far in 1999, including the Japanese index.

The middle panels show the same variables for selected Asian countries. In real terms, the dollar has reversed much of its appreciation against the Thai baht and Korean won that occurred as the crisis spread in 1997. Most recently, those currencies have been fairly stable in nominal terms and inflation has been quite contained, developments that we expect will continue. We have incorporated into the forecast a stable Hong Kong dollar peg to the U.S. dollar, but some nominal appreciation of the dollar against the Chinese renminbi in 2000.

With U.S. inflation generally above that in Hong Kong, the result is slight real dollar appreciation in both cases in our outlook. Asian stock market indexes are among the most euphoric and may be overstating how much progress has been made in addressing the structural problems laid bare by the crisis. In recent months, the foreign sector of the Chinese stock market (the black line) has risen particularly sharply.

The three major Latin American countries are shown at the bottom. We are projecting that the Brazilian real will remain near current levels in nominal terms. With Brazilian inflation contained but above U.S. rates, the real should appreciate some in real terms, i.e. dollar depreciation. Controversy over the Argentine peso convertibility regime abounds. Proposals for dollarization are still actively discussed, yet there have been market rumors of ending the peg. With little firm basis to judge how this issue will be resolved, at least until the election in October, we continue to expect the peg to hold. In that event, with Argentine inflation expected to remain below U.S. rates, the dollar should rise slightly in real terms against the Argentine peso. The stock markets in Brazil and Mexico have shared in the optimism being expressed elsewhere. In Argentina, ongoing market concerns have restrained increases.

Your next chart presents our outlook for foreign growth, with some details on the industrial countries. As is evident in the top left, we anticipate a convergence of U.S. real GDP growth with the average of that abroad in 2000. Our view that real output growth abroad should pick up this year is bolstered by the surprisingly robust first-quarter results that have been reported for some countries, including Japan. We see some of that strength as transitory, however, and so look for some offset in the current quarter and, in general, have not extrapolated even stronger growth performance into next year. As can be seen at the right, the lion’s share of the improvement is expected to occur in developing Asia, with somewhat less acceleration in Latin America. Industrial country growth is projected to firm.

In the middle left panel, the latest data on industrial production reflect the somewhat lackluster performance in Europe in recent quarters in contrast to the vigor in Canada. The latest data for Japan show some improvement, but not enough to explain the 7.9 percent annual GDP growth in the first quarter that was recently announced. Our projection for sustained expansion in these countries rests in part on the accommodative monetary conditions that are visible in the middle right panel. Some improvement in business confidence, seen in the lower left panel, is another factor leading us in that direction. The Japanese Tankan report for the second quarter is due to be released shortly. A significant move in the positive direction is widely expected, especially in light of the fact the survey was taken shortly after the strong Q1 real GDP data were released.

The top panels on Chart 9 document the recovery that is unfolding in the Asian crisis countries. Industrial production has been rebounding since the middle of last year, with production in Korea moving above its pre-crisis peak. Dollar interest rate spreads have moved back down, though not to the levels of early 1997. This narrowing reflects improved market confidence in these economies, but also the recognition that spreads before the crisis were too low.

The recovery in the developing Asian countries remains vulnerable, and a major disruption elsewhere could renew pressures on them. Although we are expecting that China will experience sustained moderate growth and financial stability, developments in that country are one possible source of renewed volatility in Asia. The middle left panel highlights some external issues. The Chinese trade surplus (in black) has been shrinking since mid-1998. At first, a sharp drop-off in exports narrowed the trade balance; in recent months, exports have recovered somewhat but imports have surged. The higher rate of recorded imports may reflect anti-smuggling initiatives taken recently by the Chinese. The red line shows foreign direct investment in China. While there seem to be seasonally low inflows in the first quarter, the data for this year are below those for the first quarter in both 1997 and 1998. Foreign direct investment has tended to go into the export sector and to support investment in the non-state sector. The real depreciation of other Asian currencies has put pressure on the Chinese export sector and may weaken inward direct investment. The right panel illustrates the deflation that China has been experiencing, another symptom of the depressed demand within China. Industrial production bounced back in the second half of last year from some slowing earlier. The most recent months' data suggest that production continues to expand moderately; as a consequence, our forecast is for somewhat slower growth in China than has been the case in the past, but we are not looking for a deflationary spiral to become established.

The lower left panel suggests some risks for the developing Asian economies. The emergence of recovery and the return of financial market confidence could undermine the momentum behind the reform process. In

Korea and other countries, where difficult issues of industrial relations and corporate governance need to be addressed, moderate growth may lessen the sense of urgency and the political will for reform. In many of these countries, banking sector problems continue and non-performing loans are still a large share of total bank loans. Moreover, the corporate sector needs resolution of these debts so that private investment can resume efficiently. In addition, weakness in the Chinese economy might spark political turmoil there and could derail recovery in Asia in general.

The Latin American countries are featured on Chart 10. As you can see in the upper left, production in Mexico has largely withstood the spread of financial volatility to Latin America. In Brazil and especially Argentina that is not the case; production has been significantly reduced. For all three countries, the stripped spreads on dollar-denominated Brady bonds have moved back down following the previous spikes. The most recent segment of all three of those lines shows the backup in spreads that has occurred in response to uncertainties in Argentina about the government's fiscal program and the commitment to the peg of the currency to the U.S. dollar. Market nervousness was heightened by the announcement in May of your move to a tightening bias and the possible implications of a slower U.S. economy and higher dollar interest rates for Latin America.

The middle left panel illustrates that improvement in the external balances of these countries has been limited despite currency adjustment in Brazil and Mexico and slower domestic demand. Continued dependence on capital inflows implies that these countries remain vulnerable to events that might disrupt global financial markets. Still, on balance, events in these countries have been more favorable than we were expecting in February. One bit of evidence is that Brazilian domestic interest rates have come down, without negative repercussions, as shown in the middle right panel. Lower domestic rates are critical in keeping the domestic debt in Brazil from swelling at an alarming rate. The surprisingly moderate response of inflation to the currency decline, shown by the red line, has been an important factor behind the decline in domestic interest rates.

The immediacy with which market spreads reacted to disappointing news in Argentina suggests that the situation in Latin America remains fragile. If key financial variables shift abruptly, the forecast of moderate growth on average in the region could be derailed. The major risks appear to be those listed in the lower left panel. Some of the fiscal steps taken to date by Brazil were one-time measures. Evidence of significant forward progress on a permanent basis is lacking. If markets sense continued fiscal problems in Brazil, they will be quick to move rates, which in turn will exacerbate the fiscal problems. In Argentina, both domestic and foreign investors are essential to the maintenance of the currency peg and to the financing of Argentina's external deficit. Despite some insurance that the government has taken out against financial contingencies, Argentina remains vulnerable to a loss of confidence. Elections this year in Argentina and next year in Mexico add to the markets' sensitivity to any indications of policy missteps by those governments.

My final two charts focus on U.S. trade. The top panels of Chart 11 show exports and imports for selected trading partner regions. Exports to developing Asia stalled in 1997 and then declined; exports to Latin America followed suit a bit later. Exports to Europe and Canada have, on balance, grown in nominal terms, but not by much. In contrast, U.S. imports from these regions have been a source of expanding demand that has helped them to sustain expansions or mitigate declines of production.

In the oil market, an agreement in March among producers to restrict supply and some evidence to date of compliance with that agreement have been successful in raising spot oil prices. We expect that U.S. oil import prices will follow this path, but that both those prices will move back slightly as some producers succumb to the temptation to increase output at the higher prices. Non-oil commodity prices fell sharply in 1998, in part in response to weaker global demand. As Mike noted, we do not expect that disinflationary element to be present going forward.

The bottom two panels explain the elements of our forecast for core import prices--that is the prices of goods other than oil, semiconductors, and computers. We look for those prices, the red line, to move from showing small declines to showing small increases by the end of the year. Next year, core import prices should rise, but less than 2 percent for the year as a whole. This acceleration in import prices owes to the disappearance of the downward effect of global commodity prices, shown as the bars in the left panel, and to a shift from downward to upward pressure imparted by the combined effect of foreign prices and the exchange rate, the bars in the right panel.

The top panels of Chart 12 decompose the elements of our forecast for the quantities of core exports (goods excluding agricultural products, semiconductors, and computers) and core imports (goods excluding oil, semiconductors, and computers). For exports, we look for foreign GDP growth to return to being a strong positive factor while the negative impact of past dollar appreciation wanes and ceases to be important. For imports, stimulus both from U.S. GDP growth and from relative prices (largely the exchange rate) lessens over the forecast period; accordingly, we see core import growth slowing to about 6 percent.

If all those pieces do fall into place, real net exports, the middle left panel, will continue to exert a negative influence on U.S. real GDP growth but to a diminishing extent. The nominal trade deficit will continue to widen, however. And despite a boost from some revisions to data for our investment position, and therefore some adjustments to estimates of flow income, the current account deficit will continue to expand, reaching some very large numbers. Relative to GDP, the current account balance is less startling, but we anticipate that during the current year it will breach the low reached in the late 1980s.

If global recovery proceeds more or less along the lines we have suggested in the Greenbook, so that no new crisis elements command the attention of markets, then the rapid pace at which the U.S. external deficit is widening and the magnitudes that it is reaching may receive more attention. We revisited our slightly more aggregated model that simulates longer-term relationships. The continued strength of the dollar and the relative cyclical strength of the U.S. economy over the past two years have made the starting point of our analysis relatively unfavorable. Evidence that the potential rate of growth of the United States has increased recently, while that abroad has not, imparts an even greater sustained tendency for the U.S. external deficit to widen over time than conventionally accepted.

The panels at the bottom of the chart show the current account relative to GDP, on the left, and the net international investment position relative to GDP, on the right. The baseline assumes that both in the United States and abroad, output returns in the near term to equal potential and then grows at potential rates thereafter. We have also incorporated some sustained real dollar depreciation into the baseline, 1½ percent at an annual rate. Nevertheless, the baseline shows chronic widening of the current account and deterioration of the net investment position.

Such an outcome implies the underlying variables are not mutually consistent and some adjustment in one or more of them would be needed. The parameters of this model, based on historical experience of the past two decades, suggest that, were the adjustment to come solely through the price competitiveness of U.S. goods, the real depreciation of the dollar would have to average 4¼ percent per year in order for these ratios to stabilize as shown by the red line. Alternatively, adjustment could come from income channels rather than price channels. If foreign industrial output were to move to a higher rate of potential growth, perhaps as a consequence of some of the factors that have increased productivity in the United States, and if U.S. imports were to shift over time to being less responsive to U.S. income growth, then the adjustment path shown by the blue line would result. Clearly, actual adjustment will likely entail both channels. These results suggest to us that greater market attention to the path for U.S. external balances is likely although the timing of that attention is still uncertain.

Mike will now complete our presentation.

MR. PRELL. The final chart summarizes your forecasts. In short, the central tendencies--constructed here by dropping the high three and low three of the distributions for each variable--are closely in line with the staff's Greenbook numbers. Y2K effects are minimal.

Perhaps more interesting--and potentially more relevant in light of the statutory requirement that the Humphrey-Hawkins report comment on the relationship of the Fed's monetary policy objectives to the Administration's forecast--is the comparison of your forecasts to those in the right-most column of the table, drawn from yesterday's Mid-session Review budget document. Your central tendencies are noticeably more optimistic about real GDP growth this year and next than they are, but little different with respect to CPI inflation. I'm not in a position to read your minds or those of the Administration forecasters. However, I'd note two things: First, it would appear that the Administration forecasters have anticipated no change in short-term rates, so monetary policy does not seem to be key to their slower growth forecast; second, although they've raised their assumption regarding trend productivity growth, at only 1.6 percent for nonfarm businesses it lies well below the 2¼ percent implicit in the Greenbook projection.

CHAIRMAN GREENSPAN. Thank you very much. Questions for our colleagues? President Parry.

MR. PARRY. Mike, I have a question about the Y2K effects. The quarterly impact of Y2K in the forecast is primarily an inventory effect. One gets the impression that there could be some effect--I don't know the size of it--that could work in an opposite direction in the sense that we hear of companies postponing projects. Many banks, for example, have delayed combining their data systems as they have merged, and I imagine there probably are examples in other industries. The assumption at least is that sometime in the year 2000, though perhaps not immediately, they are going to begin those projects--and not all of them are IT projects. Is there the potential for a significant reverse effect that we are not taking into account?

MR. PRELL. We have taken account of three categories of effects here. One is a precautionary stockpiling, and we have a very modest amount of stockpiling occurring on the part of both households and businesses. Businesses in many cases will want to have some extra supplies on hand beginning in 2000 just in case the normal supply channels are disrupted. The second element is some disruption. There will probably be, somewhere, some malfunctions--electrical outages or whatever--that disrupt some public services at the beginning of next year. But again, we made the assumption that those will be very minor and quickly resolved. The third set of considerations relates, I think, to the point you are raising. In our case, we focused it entirely on the computer area. We have assumed that the remarkable strength of computer purchases in 1998 and hefty purchases in the first part of this year reflect in part some speeding up of replacement cycles to replace non-compliant equipment. And we think there will be, at least in some firms, a lockdown of computer systems in the latter part of this year, a falloff in computer outlays, and probably a lot of scurrying around to get the last minute fixes done. So there may be some subtraction from productivity on that score. Next year there will probably still be some fixing up of glitches that are discovered early in the year. But as we move through the year, we would anticipate a rebound in computer outlays and perhaps associated investments as firms feel that they are in the clear and can go back to the normal strategies for their companies.

We scaled all of these things, I think, pretty small. The computer swings are quite marked, but I think the inventory question is really quite open at this point. Our sense is that a lot of firms have not yet really settled their plans on how much they are going to stockpile. They are still in contact with their suppliers, trying to get assurances that there won't be problems and trying to assess where the risks may be. We anticipate that they will firm up those decisions over the next few months and, therefore, that most of the inventory building will occur in the latter months of this year. That is when the production effects will probably show up for the most part.

MR. PARRY. Okay.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. I have a follow-up question to that. I know that the numbers work out right and all of that, but the thought of having a first quarter with no growth that seems to be driven to a large extent by a Y2K inventory swing just doesn't feel right. I recognize that we are going into a period of slowing growth around that time, so some portion of the slowing reflects that. But to go from growth of something like 3.9 percent in Q4 1999 to something close to zero in the first quarter of next year just doesn't square with all the information that we have been gathering about where people are with Y2K.

We had a session on Y2K issues with a wide range of industries on Friday and we invited the media. We had representatives from the electrical and telephone industries, from supermarkets, police departments, and banks. We had the FAA there, too. The theme was exactly the same in every single industry: Somewhere between 85 and 95 percent of their systems are Y2K compliant, ready to go just as ours are. And there is a lot of near-term focus on both contingency plans and outreach. We had no trouble getting the key people to come in and talk. We populated the audience with media people, including some from cable television. I have seen television programs about Y2K on the local cable stations almost ad nauseam since then. There is a lot of desire on the part of these industries to get out the message that they are ready. We've seen some Gallup poll surveys that tell us the more people know about the banking situation and so forth the less they are likely to do strange things or think about doing strange things at year-end.

So I am wondering whether--as cautious as I know you have been and as accurate as I know the numbers are--we are really going to see that kind of swing over that short a period of time as a consequence of Y2K.

MR. PRELL. I would just reiterate the thought that we have really very small effects built in here. When they are annualized, they whip these numbers around. In the recent NAPM survey at midyear, one of the questions asked of the purchasing managers was what they might do. We tried to do some back-of-the-envelope calculations based on those numbers. And I can tell you from just looking at that, in manufacturing materials it is a multiple of the inventory effects we have built in here. If people begin to get a little panicked--if they get stirred up by the end-of-the-world TV programs or articles that undoubtedly will be offered in the closing months of this year--the $25 worth of precautionary expenditures per household that we built into this forecast will be a fraction of what will occur.

Now, some of this will just mean that stocks will run down in some places because firms will not have produced enough to accommodate that demand, so it will all come out in the wash here. But I think the potential is for even bigger swings than this.

It may be that people will be sufficiently reassured only to take a few hundred dollars out of their bank account, but that's symbolic of the kind of concerns that will lead people to do some other things as well. I guess I'm somewhat conditioned by my experience here in Washington, D.C. when there is the slightest hint of a possible snowstorm and people buy six months' worth of toilet paper. People do get carried away at times. And for a purchasing manager, the cost of ending up with a few extra materials on the shelf that can be used up in the first weeks or months of 2000 is not very high as opposed to being short in what is needed to keep the production lines running. So we are highlighting something that potentially could make for a considerable amount of noise in the data. In terms of your numbers and what we would be presenting to the Congress in the Humphrey-Hawkins report, on a fourth-quarter-to-fourth-quarter basis the effects are so small as to be trivial. So I don't think there is cause to make any big to-do about this other than to highlight the bit of uncertainty that exists about what might occur at the end of the year.

MS. MINEHAN. I have one question on a different subject. On your Chart 4 on financial fragility, when we measure debt levels against either the value of household financial assets or household net worth or we look at corporate debt relative to measures that incorporate the value of the stock market, are we kidding ourselves to some extent? Shouldn't we be looking at it against something that doesn't take into account the value of assets that, when they decline, might tend to weaken the positions that we think are strong only because equity assets are so overvalued?

MR. PRELL. I think there is much to be said for that point, and that is why I focused on the ratios I have here. I focused in these Survey of Consumer Finance runs on proportions of payments to income, thinking that that represents people's ongoing cash flows. As I noted, for shareholders that may include some realized capital gains. But even if the market goes down, I suspect some people in their panic might realize some capital gains, so they will get some cash from that in some instances.

MS. MINEHAN. But hasn't corporate debt as a percentage of GDP gotten fairly sizable these days?

MR. PRELL. As a percent of GDP, sure. In the recent period, corporate debt has been rising relatively rapidly. Again, it's a question of what balance sheet ratios one wants to look at. Many firms have a good deal of cash right now, so I don't think the corporate balance sheet picture looks particularly troublesome. And I don't think the behavior of the rating agencies suggests that there has been any clear deterioration.

MS. MINEHAN. That certainly has not happened.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. On the Y2K issue, I don't think there is any potentially important event since I have been an economist about which we have less professional basis for speculating. [Laughter] I really don't. It seems to me that the role for us here is to ensure that the things we say try to minimize the impact of this event. The kind of thing we should say is that, based on everything we know about all the preparations that we and everybody else have made, there is no reason for any rational consumer or any rational business to do anything that is going to show up in the aggregate data.

MR. KELLEY. Go for it, Bill!

MR. POOLE. That is what I think we could offer as economists. As for trying to speculate about things on which we have no professional knowledge, I just don't know what to say about them.

CHAIRMAN GREENSPAN. Further questions or comments?

MR. HOENIG. Karen, on your chart 12 entitled "U.S. Current Account to GDP Ratio" what assumptions do you have for your baseline? How did you get the baseline?

MS. JOHNSON. The baseline starts with the Greenbook forecast and the initial extension that is sort of implicit in the Bluebook.

MR. HOENIG. In the Bluebook, okay.

MS. JOHNSON. The baseline brings growth in activity abroad and in the United States back to potential and then holds it at potential. That is of critical importance to this particular model because the minute we decide what that growth rate is going to be and multiply it times elasticities, we've answered a lot of the questions about what is going to happen to trade. The elasticities are given so that there is no scope within this model for any type of feedback between the factors that might be driving demographics or driving savings and investments to change the propensities to import and to export. But we did in the blue line sort of exogenously adjust those to see what would happen if we thought there were reasons to believe that they might move back in a favorable direction. We were addressing the questions of "how much would that have to be?" and "what would it look like if it happened?" But otherwise it's our best guess of what potential is in the different countries that we modeled, plus the Bluebook assumptions with respect to the United States and a 1½ percent real appreciation of the dollar. Embedded in that also are some assumptions about interest rates and the like that have to be there to flesh out the current account.

MR. HOENIG. Refresh my memory, what is the import elasticity used in the baseline?

MS. JOHNSON. For the United States it is approximately 2.

MR. HOENIG. Thank you.

MR. GRAMLICH. I had not seen the Administration forecast shown here. Is this the growth forecast in the recent budget estimates that just came out in the newspapers that added something like a trillion dollars to the surplus over a 10-year period? Given the size of their addition to the surplus, their estimate of growth is very, very modest. So by the FOMC's standards even that would be an underestimate, right? Does all that follow?

MR. PRELL. That's what I was suggesting. These are the numbers from the Mid-session Review that was published yesterday. They have characterized it as being in line with the Blue Chip forecast and conservative.

MR. GRAMLICH. In point of fact it is quite a bit below the Blue Chip.

MR. PRELL. I don't know what the longer-term numbers they might have from the Blue Chip forecast look like. But I must say that they have tended to err on the low side, I think publicly and purposely in their process, which makes some sense if they are trying to be cautious about counting revenues. On the other hand, it may skew a fiscal policy decision by suggesting that things are tighter than the numbers might otherwise have indicated. There is clearly a political element in that decision.

MR. PARRY. They were on the low side in February, too, you know.

MR. PRELL. Yes, they've tended to be very, very low.

CHAIRMAN GREENSPAN. One has to be a little careful about translating that growth forecast into the surplus numbers because the so-called technical adjustments are overwhelmingly important. It is quite possible--I don't know if this is true, I'm just saying it's a possibility--that their GDP forecast can come in low and they overwhelm it by technical adjustments that would create a big surplus. So, we have to look at the detail.

MR. PRELL. In fact, what little insight we have would suggest that their surplus numbers look on the low side relative to ours in part because they put in higher expenditure numbers than seem to be in train at this point, as opposed to it being simply the difference in our economic assumptions.

CHAIRMAN GREENSPAN. But they are making very significant projections into the future.

MR. PRELL. Sure. Fortunately, we have not gotten into 15-year budget forecasting yet.

CHAIRMAN GREENSPAN. I hope you don't have to bite your tongue! [Laughter] President Stern.

MR. STERN. Karen, I would like to go back to the baseline forecast on the bottom of Chart 12 that Tom Hoenig mentioned. As I understand it, in those baseline numbers you have the dollar depreciating mildly in real terms. If I understood Peter's litany of things that might come back to haunt us--having to do especially with the euro and the yen--they seem to imply that the euro and the yen might both depreciate relative to the dollar once market perceptions change. That is, the attitude right now may be that the Japanese are succeeding in stabilizing the yen, but we don't expect that to last. If that is right, these numbers would look even worse, presumably.

MS. JOHNSON. Well, the model that is embedded in these two charts was put together by the International Finance Division two years ago. And it came to somewhat less fearsome conclusions because the dollar is two years' worth of appreciation lower now and we have not had two years of full-blown U.S. deficits piling up and so forth. We said the same thing then, and in fact the world went completely the opposite way. Even though we said then that the current account would begin to get alarming and the projections were inevitable, the numbers have gone in the other direction for two years. So there is no sense in which I mean this chart to be telling you what is going to happen starting tomorrow.

MR. STERN. No, I understand that. That's fine.

MR. JOHNSON. I'm only flagging the problem that is out there, which is that to the extent Japan's economy turns down, there is some possibility that markets may react negatively once the dust is all settled and what is really going on is clear. And if Japan continues to drag its feet about some of the more important policy adjustments, we could indeed see yet more years in which the problem in fact gets worse before it gets better.

MR. FISHER. If I could just clarify my comments, in the short run I am more worried about a rapid yen appreciation such as the one we had in 1997-98--that kind of episode that they're currently bottling up. That's not a forecast of where it will all come out in the wash once the Japanese economy settles down. But it's the oscillation of the portfolio effect in and out of the Japanese financial sector--rushing out, rushing in--that could give us a burst. That's what they are resisting now, they think. So there's just more volatility there in the short run. In the long run I wouldn't stake my bets there. The weak euro/strong yen is the short-run scenario.

CHAIRMAN GREENSPAN. Any further questions? If not, why don't we take a short break for coffee.

[Coffee break]

CHAIRMAN GREENSPAN. Would somebody like to begin the round table discussion? President Parry.

MR. PARRY. Thank you, Mr. Chairman. The Twelfth District economy has expanded at a solid pace in recent months, with growth accelerating from earlier in the year. District payrolls increased at an average annual rate of 3¼ percent during April and May, as rapid growth in some states more than offset a slight slowing in others. The acceleration was dominated by California, where payrolls expanded at a 3¾ percent average annual pace in April and May, well above the 2 percent pace of the first quarter. Payrolls also grew rapidly in Arizona, Nevada, and Utah. In Alaska, Idaho, Oregon, and Washington employment growth slowed in recent months, falling below the national pace of growth. The construction and services sectors continue to be the strongest sectors of the District economy. Employment growth in construction was particularly rapid, up by 10½ percent at an annual rate during the two months ended in May. The rate in the services sector was 5¼ percent. District manufacturing payrolls have declined slowly in 1999, although employment has stabilized in recent months. Increased demand for computers, consumer electronics, and telecommunication products, as well as the resurgence of many economies in Asia, are boosting sales and orders throughout the high-tech manufacturing sector.

Although improved market conditions have yet to generate significant job growth among District high-tech manufacturers, employment levels have stabilized and output is rising. Thus far, productivity gains and increases in the average workweek have allowed many high-tech manufacturers to meet production goals without boosting employment. However, these firms will likely need to increase employment in the near future since they anticipate an acceleration in the growth of sales and orders and most have absorbed what had been excess capacity in their existing employment bases.

Turning to the national outlook, data since the last meeting have done little to change our perception of the basic forces shaping the economy. In our forecast, demand is expected to remain strong in the near term, allowing real output growth to average more than 3 percent over the remainder of this year. However, recent increases in interest rates combined with an expected flattening of the stock market should start restraining demands toward the end of the year. Consequently, we expect real output growth to slow to about 2¾ percent next year.

Recent high levels of demand have not translated into high inflation because of the favorable developments on the supply side. Consequently, core CPI stands roughly unchanged in our forecast. However, as I mentioned last time, the recent history of forecast errors makes it hard to be very confident about any forecast of this split between output growth and inflation. Because there is no way to determine the size or persistence of the current supply shock at this point in time, it is really hard to tell how fast the economy can grow without inflationary pressures.

Forecasts that utilize the level of the output gap can be quite misleading, as illustrated by the staff papers distributed by Don Kohn. This uncertainty suggests placing more emphasis on nominal GDP growth, which tends to internalize offsetting movements in inflation and output growth. And its use as an indicator can be similar to the way we used the monetary aggregates in the past. In this framework, the small deceleration in annual spending growth over the last three years to a rate around 5 percent helps me to be more reasonably optimistic about inflation. However, I am not completely comfortable with recent developments, as nominal GDP has grown at a 6½ percent rate over the last two quarters. Thus, I will be watching the spending numbers carefully to determine whether this is a one-time event or the beginning of a sustained increase in nominal spending. Thank you.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. The Kansas City District's economy remains quite solid, as I reported last time. Retail sales are well above year-ago levels. Real estate sales and construction activity remain quite healthy. Manufacturing activity actually shows some further signs of improving, following an earlier period of weakness. Factory managers are reporting to us that capacity utilization is up considerably from earlier months this year and nearly back to year-ago levels. Energy activity has continued to improve in June according to our producers in the region. The farm economy remains in a deep slump, and I would say that we are hearing increasing reports from rural America that the farm downturn is beginning to hurt Main Street and that we are going to see some repercussions on the banks.

Having said that, the labor market in our District remains extremely tight. The District's unemployment rate edged down to about 3½ percent this past month. And there is now some additional anecdotal evidence that persistently tight labor markets are limiting growth in some District areas. Just as one example, American West announced it will move 180 jobs from the Kansas City area because it cannot find people to fill the jobs there. Now, where they are going to move them to isn't all that clear, but certainly they can't fill the jobs in the Kansas City area.

Turning to the national scene, I continue to expect the trend in economic activity to moderate by the end of next year. For now, though, I foresee another year of strong economic activity, with real GDP growing on average about 4 percent this year and slowing to an average of just above 3 percent next year.

As for my views on the inflation outlook, I would note a couple of points. Similar to what Bob Parry just said, my stronger forecast represents yet another upward revision in the outlook. I notice in the consensus forecast that others share that view. I continue to be impressed by the momentum of the U.S. economy as we make these adjustments, and I also continue to be impressed by the fact that the inflation numbers are still coming in at a modest level.

Having said that, I still judge that the risks on the inflation outlook are on the upside. First of all, as I have said before, the funds rate is 75 basis points less than it was a year ago when the economy was already expanding at a fairly good pace. Since then, the financial turmoil that occurred last fall has largely subsided, risk spreads are in fact lower, and growth is projected to remain strong. So in that context, I think the stance of monetary policy is accommodative. When one looks at M2 growth, while it has slowed most recently, it remains relatively strong--increasing by about 8 percent over year-ago levels. And as others have noted in a different context, there are some signs that inflation expectations are rising. The inflation premium embedded in the Treasury inflation-protected securities has been rising since last fall. So, while recognizing that inflation is modest, I believe there is some upside inflationary risk in the context of this very strong economy right now.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. Business conditions in the Seventh District remain quite good. Light motor vehicle sales in May matched their 12-year high reached last December, and industry contacts suggest that June sales will exceed the strong year-to-date sales pace of 16.4 million units. Net orders for medium and heavy-duty trucks continue to run above long-run averages.

Commercial construction activity in Chicago has gained momentum in recent months but with few signs of speculative activity. Lenders and investors are requiring that 50 percent of office space be pre-leased, and that is one reason some previously announced projects are not making it off the drafter's table.

More generally, our manufacturing sector is still performing well. For example, the Chicago Purchasing Managers survey results for June show the overall index moving further above the 50 percent level, from 57.9 percent in May to 60 percent in June. That survey is going to be released to the public tomorrow at 10:00 a.m. Even the steel industry reports a bit of improvement, as capacity utilization rates have risen noticeably over the past few months, although they remain significantly below typical operating levels.

Moreover, as Tom Hoenig just mentioned, conditions in the ag sector generally remain depressed, with no significant improvement likely for some time even with improving conditions abroad. Nonetheless, our District labor markets are still extremely tight. We spoke with contacts at two national temporary service firms headquartered in our District and both reported continued difficulty in finding workers to satisfy clients' demands. One contact even said that he had shifted all of his marketing expenditures to finding workers and none to finding clients. Both firms also indicated that we have passed the peak for Y2K-related hiring of technical personnel.

On the price side, we increasingly hear reports of price increases that stick, both for final and intermediate goods. Auto dealers and some casual dining establishments have been able to raise prices modestly, and a few retailers indicated that strong sales results were not as dependent on promotional activity as before. The Chicago Purchasing Managers Report for June again indicated that relatively more respondents were experiencing increases in prices paid than declines. The prices paid component, seasonally adjusted, went from 52.5 percent in May to 57.2 percent in June. That is the fourth consecutive month above 50 percent, and it is the highest since December of 1997.

Before turning to our national outlook, I'd like to summarize some recent discussions about productivity that we had at our Bank. At our most recent board of directors meeting, which the Chairman attended, we heard some very optimistic assessments of the prospects for e-commerce to increase productivity in several sectors of the economy. Our directors reported on how advances in computer technology have affected their particular companies and industries--manufacturing, retailing, banking and services in particular--and on the potential for these technological advances to fundamentally change the nature of our economy. The reports consistently noted that technology has enhanced productivity pretty much across the board and that its potential to yield further productivity improvements seems limitless.

On the other hand, at our Academic Advisory Council meeting one participant presented a paper suggesting that the recent pickup in productivity growth is due only to: (1) measurement changes; (2) the normal cyclical response of productivity; and (3) acceleration of productivity growth in the computer industry itself--not in industries using computers but in the information processing and equipment sector alone. The analysis suggests that productivity gains in the computer manufacturing sector have not spilled over to the rest of the economy, at least in the data, casting some doubt on how widespread productivity increases have been. Obviously, productivity growth is a key issue confronting us today.

Turning to the national outlook, our views are reasonably similar to those in the Greenbook. Our forecast for core CPI inflation is, however, a couple of tenths higher for next year. More importantly, even with a tightening in policy similar to that assumed in the Greenbook, we see further acceleration in inflation in 2001. So the upside risks remain substantial. The downside risks, on the other hand, are considerably less than those we faced when we last adjusted policy. Most of the news on the world economy is suggesting more strength than previously expected. Moreover, risk spreads, while still somewhat elevated, are back to more reasonable levels, and creditworthy borrowers are finding financing. Meanwhile, the same factors that have been propelling the rapid expansion of domestic demand--high income growth, high wealth levels, and high consumer confidence--remain in place. So it seems to me that it's the time to begin the process of tightening policy.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. The New England economy remains strong, with tight labor markets reportedly constraining business growth, and strong residential and commercial real estate markets, particularly in the Boston metropolitan area. In the words of one of the Bank's directors, Boston is "absolutely booming," though this description likely does not apply equally to all cities in the District.

In May, the total number of people employed in the region fell a bit from its April level, but employment continues to expand at a pace that is higher than its long-term trend. The unemployment rate remains well below the nation's, although it has bounced around a bit in some states and ended slightly higher in May than in April. After virtually no growth in 1998, the region's labor force in 1999 is growing in every state except Massachusetts. Given all the stories one hears about hard-to-find labor, however, one has to believe that these new entrants to the labor force do not have the skills for the jobs being created.

All of the Bank's contacts recently have complained that hiring difficulties are constraining growth. Technical staff have been hard to come by for some time, but job vacancies seem to abound in every service and retail establishment. The job market for summer teenage employment is strikingly good if my 17-year old and his friends are any indication of that market. All of them don't have minimum-wage jobs as compared with the experience of my daughter and her friends a couple of years ago. In fact, my son is now making $9 an hour for selling CDs, which he would probably do for free. [Laughter]

Moreover, we hear stories--and I know of actual examples--of temporary help firms reaching out to teenagers who have keyboard skills and offering them $12 to $14 per hour to fill the vacancies the firms have during the summer. Our contacts with temporary help firms more generally, like President Moskow's, see business as good to great, but with revenues constrained by a lack of workers. IT staff are hardest to come by, as has been the case for a while. Some temporary help firms have broadened their base of workers to light industrial staff simply because there is a better supply of low-wage workers; according to one contact, even former welfare recipients are getting lucrative offers now.

Amazingly, wage and price increases continue to be moderate. Inflation as measured by the CPI abated slightly in the Boston metropolitan area in recent months, largely due to a more sizable decline in fuel costs locally than nationally. Wages in manufacturing and retail are reported to be growing in the range of 3 to 5 percent this year, even given the dearth of supply. Firms report that changes in organizational structure and in non-wage job enhancements such as training are being pursued in favor of wage increases.

Residential real estate prices for the region grew faster than for the nation as a whole, and commercial real estate conditions are strong in several metropolitan areas. Until quite recently, Boston enjoyed the lowest Class A office space vacancy rate in the country and very low rates for Class B space as well. Rents for commercial space continue to rise and now exceed those in both New York and San Francisco. While high rates obviously mean profits for Boston building owners, they could also deter new or expanding businesses from locating in Boston. Indeed, the latest data show downtown vacancy rates have doubled from their extremely low level, though they continue to be below the national average. Assuming these data are not an aberration, there may be some evidence of a cooling of demand at current price levels.

Turning to the national scene, our forecast--like those of others--is similar to the Greenbook forecast. Economic activity is projected to slow this year and next as a result of moderating growth in consumption due to buyer satiation and a waning wealth effect from leveling stock market prices. Business investment also slows in our forecast, especially for computers, and net exports exert a continuing though smaller drag. Actually, in our forecast the growth in exports turns moderately positive this year, given expectations about growth in foreign countries. In our view GDP growth in 1999, Q4 over Q4, will be about 3½ percent, not unlike the Greenbook, and will then decline to the high 2 percent area in 2000. We, like the Board staff, have now provided for a slightly higher growth potential for the economy at about 2¾ percent, at least for a period of time. And in our view, growth in 2000 will slow to about that level and thus unemployment will stay roughly flat. However, without a policy change, our forecast suggests that core inflation could rise in 2000--as does the Greenbook forecast--but the increase is larger and takes core price inflation to around 3 percent, which is clearly unacceptable in my view.

Now, there is no doubt that this forecast is surrounded by a cloud of uncertainty. Certainly all the papers we have received since the last meeting have pointed to the various sources of that uncertainty and the reasons to be agnostic about projections of both output gaps and inflationary growth. Indeed, when I look at our track record at the Federal Reserve Bank of Boston and the track record of the Committee in general, we have been underestimating growth and overestimating inflation for some period of time.

Perhaps our assessment of a positive output gap is wrong and later data will provide ample evidence of why we've been seeing such low inflation. But perhaps later data will confirm both our current assessment and our concern that temporary factors have played a large role in the current run of economic good fortune. The effect of some of these temporary factors is clearly waning. In particular, estimates of trade-weighted external growth are rising for both 1999 and 2000, which should affect both the demand for U.S. exports and the supply of excess capacity worldwide. Absent tighter policy, financial imbalances now evidenced in high stock market PE ratios and in the sizable growth in corporate and personal debt, even though it's affordable, may well deepen and pose threats when policy does tighten or a slowdown occurs as a result of other factors.

Clearly, there are risks on the downside--the external deficit and the related low saving rate, just to name a couple. But the upside risks of increased pressure on capacity from worldwide growth and the potential for growing financial imbalances now seem both greater and more pressing.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. For the sake of variety, let me reverse the usual order of my regional comments and tell you that not everything is great in our District. We have two problem sectors: agriculture and textiles. Agricultural and farm prices remain low for the most part, as does farm income. That situation has been exacerbated most recently by a drought; we have had very little rainfall. With respect to textiles, we continue to hear reports of plant closings in Virginia and the Carolinas; most of the business is going to Mexico. These closings depress the areas where these plants are located--and especially in those three states that's usually small towns--even though many laid-off textile workers are able to find alternative employment in the currently very tight labor market.

Outside of these two sectors, though, it's generally the same old story around our region: robust consumer spending and housing activity, a revival in many manufacturing industries, and continued exceptionally tight labor markets pretty much across the board. According to the information we have--both anecdotal and a few hard numbers--consumer spending may actually have accelerated in our region in May and June. Car sales and sales of appliances and other housing-related durable goods have been particularly strong. A lot of that hefty household spending obviously is coming from consumer borrowing. Some of our banking directors tell us that delinquencies are rising and that they are seeing, and are more concerned about, consumer bankruptcies. So there are some hints of imbalances in the market for consumer credit, at least in our area. But the most significant imbalance that we have in our region clearly is still in labor markets, especially for skilled and semi-skilled construction workers. Shortages of these workers are widespread now, despite a fairly significant influx of guest workers from Canada and especially Mexico into the Carolinas and Virginias. Some builders tell us that they are actually turning away business because of this dearth of workers.

Beyond skilled construction workers, many businesses tell us that it's increasingly hard to find reasonably competent entry-level workers for just about any business. We're told that some McDonald's stores are now stuffing employment applications in the bag with the burger and fries. We hear the same stories that Michael Moskow and Cathy Minehan mentioned about the temp agencies. They have to scrape the barrel and it's hard to find anything resembling quality workers. Not surprisingly in this environment, we hear an increasing number of anecdotal reports about more aggressive wage demands than we've seen heretofore and some actual increases in wages in particular industries and local areas.

I have a brief report about the First District for you, Cathy. One of our economists has a close friend who has a house in the Boston area. The friend got an estimate last year for an addition to his house but didn't have the work done. He got an estimate again just recently, a year later, and it's up about 30 percent. That's really extraordinary!

On the national economy, I'll be brief. I don't have any special insights on the outlook at this point. I was very pleased to see the May CPI report. Obviously, the April CPI really scared me; if we had gotten a repeat of that in May, I would have been concerned that we were behind the curve. I suspect a lot of other people would have been concerned as well. So the May report was a relief, but I don't think we're out of danger yet.

The Greenbook is projecting a fairly sizable deceleration in the growth of domestic demand in the second quarter now ending and in the third quarter. I think the staff makes a good case for this; I, too, expect some deceleration in demand. Heaven knows, I hope we get some deceleration! But, frankly, I just don't see much hard evidence of it yet; certainly I don't see it in my region. What I see is continued robust household demand for goods, services, and housing, big increases in our trade deficits, and help wanted signs all over the place. In short, we seem to have a fairly significant overall macroeconomic imbalance currently. More specifically, I think we have a classic case of excessive growth in domestic demand. I'm worried that we may well be fueling that with an excessively accommodative monetary policy. Thank you.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Thank you, Mr. Chairman. As is usually the case, conditions in our region have changed only at the margin between meetings. Retail sales remain quite healthy. A number of retailers are actually telling us that they expect the third quarter to be as good as or even better than the second quarter.

As I've noted before, tourism is a particularly interesting part of our economy and an area where we often get early signals of a turn in activity or of people's outlooks. In the tourism industry bookings remain strong; they are not growing quite as fast as they were a year ago but are still at very high levels. This is the first time in a while in our surveys of the District's tourism people that we haven't heard grumbling about the falloff in visitors from Latin American, Canada, or Europe. There is a growing sense that there may have been some overbuilding in new tourist attractions in the Orlando area. If you haven't been in the area for a while, come on down! [Laughter]

Construction is still at high levels. We are seeing some slowing in the rate of growth in single family permits, but that's offset by quite strong nonresidential construction. We've recently heard new concerns about overbuilding in commercial projects in Orlando. In oil and gas, the higher oil prices that have prevailed for a while now have shown through in a modest uptick in drilling activity after a long period of decline. That should pick up further if oil prices continue to hold at their current levels.

Our manufacturing activity, as measured by employment growth, may be a bit less robust than for other District reports included in the Beigebook. Our import-sensitive industries like apparel, paper, and primary metals have seen declines. At the same time, there's an optimism that we will begin to see, or may already be seeing, some turnaround as the economies of our trading partners begin to improve.

An old story: Labor markets are still tight, and outsized wage increases are still being reported, mostly in certain high-skilled jobs. A recent example of noticeably large increases was at Ingalls Shipyard, where a three-year contract provides for a 16.3 percent increase. Pricing pressures seem to have increased a bit at the margin since the last meeting. As one our directors put it, many of the business people she talks to are increasingly determined to pass on their cost increases. Health care is a good example in our region. It's an area where pressures are great and where we are seeing some relatively large upward price adjustments. who is a major homebuilder in the region, also reports that he has been able to pass through many of the cost increases that he's seen in the building trades.

On the national front, real GDP growth is still outpacing my expectations. Other than the effects of oil and energy costs, measured inflation is not yet showing the upward drift I thought we might see by now. Nevertheless, there have been some marginal changes to the outlook in my view, suggesting our assessment that the inflation risks are on the upside was in fact correct. Our GDP projections for most of the recently depressed Latin American and developing Asian economies have been revised upward.

While the turnarounds have not yet been reflected in increases in U.S. exports and commodity prices or in capital markets, we expect that the demands for and prices of real goods and services and productive inputs will rise. This should reverse many of the favorable shocks that have slowed U.S. real GDP growth and temporarily reduced the rate of increase in prices. Furthermore, I see little on the domestic side to suggest that there will be a significant slowing in domestic demand during the rest of this year. Employment remains strong and consumer income and spending are up. Business investment spending may slow some, but it appears likely to continue to run ahead of past experience in a mature expansion.

Should the reversal of the positive external shocks occur as expected, that raises a fundamental question about the overall stance of monetary policy. Would the associated run-up in measured inflation reflect embedded inflation that has been temporarily masked by a series of favorable events? Or would the increase be temporary due to the nature of the fixed-weight inflation measures and the fact that only relative prices of energy and commodities have increased?

In general, relative price movements aren't inherently inflationary and they should be permitted to play themselves out. Such price pressures would dissipate quickly as real and financial resources are reallocated, as long as our policy stance prevents these relative price adjustments from being passed on through the economy as a general price level adjustment. However, if we persist in maintaining interest rates below what I believe is likely to be their pre-shock equilibrium levels, we may inadvertently be pursuing an easier and inherently inflationary monetary policy. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. The District economy continues to perform very well. Indicative of this, the unemployment rate in the Twin Cities metropolitan area is now 1.6 percent. Actually, it has been at that level for several months, so I don't believe it's an aberration. Estimates of the District unemployment rate are harder to come by, but that rate is probably 3 percent or lower.

Residential construction activity is very strong. This probably will be a record year for both homebuilding and sales in the Twin Cities area. Commercial construction is also strong. Some of the national developers based in the Twin Cities tell us they are seeing good business basically throughout the country. Consumer spending remains healthy, tourism is doing fine, and manufacturing for the most part is doing fine. Agriculture remains the blight on the landscape.

As far as the national economy is concerned, not surprisingly our VAR model remains quite optimistic. My own view is similar. I might briefly comment on where I think the risks don't lie. I don't think there is a risk of a precipitous slowing of domestic aggregate demand; that seems very unlikely to me. The risks abroad relative to what we thought six months or more ago clearly have diminished; indeed, we've already talked today both about better performance materializing abroad and forecasts for economies abroad being marked up. So I think in this environment we can concentrate on sustaining the economic expansion by keeping inflation low.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. Thank you, Mr. Chairman. The economy in the Philadelphia region continues to grow steadily, with tight labor markets and low inflation. The outlook is for more of the same. Residential construction is strong, with prices rising especially for upscale housing. Nonresidential construction is brisk but not booming. Manufacturers report further gains and retailers are generally doing well. Hiring and retaining skilled employees remain the major challenge. Although there are special incentives for particular skills, the norm for annual wage increases is still mostly in the 3½ to 4 percent range and increases for unionized employees tend to fall in that range as well.

Turning to the nation, we are at the point in this remarkable expansion when the risk of accelerating inflation has to be taken seriously. Raising the federal funds rate as insurance against an overheating economy is largely a foregone conclusion at this meeting.

The more important issue now is how to position ourselves going forward. Credibly resisting inflation also means being a credible evaluator of the inflation threat. To use an analogy, we need to be able to tell the difference between a wolf and the family dog. Let's be honest with ourselves: Current and pipeline indicators of inflation look more like the family dog than a wolf, and our forecasting models have for several years cried wolf when there has been no wolf. How well will a preemptive rationale for raising the funds rate hold up with that kind of support? Going forward we need to position ourselves so that we can evaluate the inflation risks on an ongoing basis and adjust monetary policy accordingly rather than box ourselves in unnecessarily.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. The pace of economic growth in the Eleventh District has slowed somewhat in the last few months. Slower activity has been concentrated in three areas: construction, energy, and exports, particularly exports to Mexico. Concerns about overbuilding have surfaced recently, and construction activity of all types, both residential and commercial, has dipped. Energy companies are behaving as though current levels of oil and gas prices are not sustainable. Their slowness to boost the rig count is probably driven in part by concerns about OPEC's ability to restrain output. Most OPEC member countries and others have not cut production to the full extent of their agreement, and fiscal pressures may necessitate increased output, particularly by Venezuela. Mexico seems to be having second thoughts about agreeing to restrain its oil output. Mexico's difficult fiscal situation has reduced its ability to raise spending on public works, a practice that is common in the year prior to a presidential election. Next year's election is expected to be close, so the incentive to augment revenues from higher oil production increases every day. Future oil prices will be determined by a race between increased OPEC and Mexican cheating on output quotas and the growth of world demand. Given the history of OPEC's output production agreements, Texas oil producers have good reason to remain cautious.

Turning to the national scene and focusing on issues that are relevant to the policy decision, I think what I'm going to do today is cry "dog." [Laughter] Referring to Ed Boehne's foregone conclusion about what we are going to do tomorrow, what worries me about that is that we may trigger an end to the grand experiment that we've been engaged in without seeing how far it could go. We held back while output surged and unemployment declined to below levels previously thought inflationary, but inflation declined instead. And we've been rewarded with the lowest misery index in history. If we end this experiment, whether we intend to or not, we will never know how far it could have gone.

What has changed? We had the April CPI report. But what about the May report? The twelve-month CPI, the headline number, has risen to converge with the core rate, but the change over that twelve-month period was driven more by dropping off the first month of the period than it was by anything that's happened more recently. We're rightly worried about accelerating inflation, but we're still in a deflationary world environment. We still haven't seen the end of the effects of the collapse of the iron curtain--all the new consumers and workers entering the world economy for the first time. Beyond the iron curtain, we've had the collapse of the curtain of protectionism in Latin America. We've had globalization in general. We've had the Internet and the convergence of technology. These are all deflationary forces.

On the issue of a preemptive move, we had preemption redemption in 1994, so why not now? What's different now? In 1994 we had inflation in the pipeline. Sensitive commodity prices were rising rapidly throughout that year. Now they aren't rising. They are barely off their multiyear lows. Another important difference between 1994 and 1999 is that we began 1994 with the pedal to the metal. We had 3 percent nominal short-term interest rates and about 3 percent inflation, yielding real short-term interest rates of zero. Now we have a 4¾ percent federal funds rate and 2 percent inflation--or less by some measures. So we have real short-term interest rates of about 3 percent now and maybe 4 percent real long-term interest rates. Asia has perhaps started to heal, which will remove a deflationary force on our own economy. But, remember, commodity prices were falling before the Asia crisis. Developments in Asia and Russia just accelerated the decline. The bulk of our price improvement in recent years came from lower import prices due to the strong dollar, but the dollar is still pretty strong.

On the question of slack in our economy, the low unemployment rate suggests that we have little or none. But the low capacity utilization rate, under 80 percent, suggests otherwise. And our economists tell me that capacity utilization is a better predictor of future inflation than unemployment. We should not forget the slack elsewhere in the global economy: Asia still has slack, both in labor and manufacturing capacity; Europe is weak and sluggish; and much of Latin America is still in recession.

If it's real growth we're worried about, I for one believe that rapid supply side technology-driven real growth is disinflationary, not inflationary. But if you're a strict demand sider, take heart from the Dallas Fed's recent forecast of real growth in the second quarter. Our forecast was, believe it or not, 2.9 percent, and that was before our staff saw the Greenbook. We're really good at forecasting backwards! [Laughter] With labor productivity growing an average 4 percent over the fourth quarter and the first quarter, it could decline by half and still be 2 percent. Add on a 1 percent increase in labor supply and that would give us noninflationary 3 percent growth for some time to come.

Turning to Peter Fisher's fourth point a while ago, I think the biggest argument for tightening at this meeting is that so many of us have threatened it that the Committee would probably lose face and lose credibility if it didn't raise the funds rate by at least ¼ point. But even then, if we kept the asymmetric directive, I think the markets would remain nervous and turbulent over the next Fed-watch period. If I had the deciding vote, I probably would vote for a small tightening just because of the box we're in. But since I won't have the deciding vote or even a key vote, I remain to be convinced.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Thank you, Mr. Chairman. The Second District's economy remains strong, though growth has clearly slowed from its brisk first-quarter pace. There are no indications of broad-based price pressures. Employment in the District grew at a 1½ percent annual rate in April and May, matching the first- quarter pace but down from 2 percent in 1998. Retailers report that sales were strong in May and early June, with less downward pressures on selling prices than earlier in the year. The housing market remains generally strong, though new construction has cooled from its vigorous first-quarter pace. Manhattan's office market has been stable in the second quarter, with vacancy rates little changed and rents rising at a more subdued pace than in 1998. Purchasing managers indicate that manufacturing activity was mixed in May, while there were reports of an upturn in commodity prices. Local banks report a dip in loan demand, some tightening in lending standards, and ongoing declines in delinquency rates.

The national economy, based on the most recent data, is continuing to grow rapidly and without increased inflation, because productivity growth is not only maintaining the approximately 3 percent level we have seen since late 1998 but if anything is improving. Our read on the second quarter is that productivity may have grown at an annual rate of 4 percent or even more.

As one of the later converts to the view that the economy is behaving remarkably differently from the past, I think it is important to remind ourselves what we should believe in and what we do not have to make any leap of faith to believe. To deny that the economy has been showing much better productivity since 1995 is simply to deny the facts. How long will this improved productivity last? At what level of improved productivity will the economy settle? We do not know the answers to those questions. Should this lack of certainty about the future confuse us in the present? I do not think it should. We don't have to know how long the productivity improvement will last nor at what rate productivity will settle. Those answers will be known only in the future. We don't even know when. More importantly, we do not need to know.

Most of us believe that the lag in the effect of monetary policy is one to two years. That is as far into the future as we need to peer. To try to look farther merely confuses us and perhaps makes us unwilling to believe the reality that is staring us in the face. I can see nothing that would alter my belief that productivity will rise at least 2½ percent during the next one to two years. That means that the economy can enjoy noninflationary growth well within the forecasts of the Greenbook or of the New York Reserve Bank.

We all say that labor markets are tight, but they have been tight for several years and workers have been found--many of them in pockets of poverty where finding a good job, or any job, was a forlorn hope. Should we be fighting that highly positive development for the good of the American people? I think not. And yet the American public and markets everywhere are waiting for us to pounce on growth and job creation and stifle them. Since I do not believe we should do that, I believe that our challenge is to clarify our strategy--first to ourselves, then to the public and the markets.

The markets are spending their time psychoanalyzing this Committee rather than analyzing the real world. That is highly counterproductive because it deprives our nation's economy of the balancing effects of the normal pulls of supply and demand in financial markets. Never-ending heavy breathing by market watchers is convincing the American people that we want to deprive them of inflation-free growth.

Clearly, the general posture of the Federal Reserve should always be to remain highly alert to imbalances, to forces which could end sustainable growth. Our policy regarding price stability on a continuing philosophical basis should be seen as symmetric, as being against both deflation and inflation. Our strategy, on the other hand, should vary with conditions. Deflation is sufficiently unlikely at this time that we should have a strategic position of concern about inflation. But we should not be in a tactical position of being constantly poised to attack an enemy that does not appear visible to me. We need to find a way to tactical symmetry--to a position where we, the public, and the markets think we are watchfully waiting but not looking for windmills to knock down.

Because of the public perception of where we are, I do not think we can achieve tactical symmetry by taking no action at this meeting. However, when we discuss what action to take in a later portion of the meeting, tomorrow morning, I am absolutely convinced that it must take us to tactical symmetry, even against a strategic background of concern about inflation. Thank you.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Mr. Chairman, it's obvious that everyone around the table is "chafing at the bit" to discuss policy, and I'm going to do my part to behave in a disciplined fashion here by just discussing the outlook.

In the Eighth District the story is very simple; it's the same old story. We're seeing exactly the same kinds of things that we have been seeing for a good number of months now. I make a special point of trying to talk to my contacts about what seems to be different, what seems to be on the radar screen that hasn't been there. My impression is very clearly that firms are successfully managing their labor market pressures.

For example, is very concerned about the labor market situation for his company. He says that its needed employees at the Louisville hub. He says that the company is having a hard time all around the country--except in Philadelphia, Ed, by the way. He says he's having no problem in Philadelphia; I don't know why the situation there is different. higher hiring referral bonuses and retention bonuses. So, clearly, that company is concerned. On the other hand, who was quite concerned about his labor situation earlier in the spring, says that now his folks are able to find labor pretty readily though they are behind on IT staffing. What seems to be happening is that case-by-case firms are coming up against the labor market pressures and they are able to manage the situation successfully. Of course, managing the situation in some cases means that they are paying more wages or retention bonuses or something, so there's perhaps some up-creep in wages involved, although obviously it is not showing up in the national statistics.

Another thing that has come on our radar screen is that our bank examiners are expressing a little concern--I want to emphasize it's a small degree of concern--about loan administration in the banks. Credit demands are strong enough and loan officers are in tight enough demand that our examiners have the sense that some of the banks they examine are simply not able to have disciplined loan administration. So there may be a bit of sloppiness in that area that could produce some problems later on. No one is very concerned about it, but I mention it because it was the first time I really had heard about that from our examiners.

We have the same situation in agriculture and so forth that has existed for some time and has already been commented on by others, so I have nothing to add.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. Several meetings with bankers in sixteen of the western and northwestern counties of Ohio two weeks ago revealed somewhat of a paradox in that area in terms of a very strong regional economy but simultaneously a very vulnerable economy. It's an area where manufacturing often runs double the national average as a share of total employment; most of that is motor vehicle-related production.

Auto companies and their various suppliers are by far the largest absolute employers throughout that part of our region. So employment levels and personal income growth are very high and spending growth has been exceptionally strong.

But bankers increasingly express their worries about personal bankruptcies; the stories about people who were current and then suddenly file for bankruptcy have returned. They say it is fairly common to have two adults in a household using the entire paychecks from all four of their jobs, including all the overtime they could get, to service their debts. So when there is a loss of one of the jobs or loss of overtime or illness or divorce, then that's it. They can no longer service the debts. One banker emphasized the condition of his customers this way: He said he is not worried about withdrawals around the time of the century date change because his customers don't have any money in their accounts to withdraw.

MS. MINEHAN. We have heard that, too!

MR. JORDAN. They said that their business customers continue to experience difficulty hiring, especially for entry-level positions. The bankers said they are often paying 18-year old teller trainees $11 to $12 an hour. Then they can't hold the inexperienced people long enough to take advantage of their productivity after the period of training, but it has been impossible to recruit experienced people.

We also did a roundup of what was going on in tourism in the region, so if you haven't been there recently, come on up! [Laughter] Given that the south shore of Lake Erie is a major tourist destination [laughter] and tourism companies are a big employer there, we talked to people at Cedar Point, Geauga Lake, Sea World, and King's Island Park to see what they were doing. Ticket prices are typically up 10 to 15 percent this year and these places are having a great deal of difficulty in recruiting employees. Cedar Point had openings for 3,700 summer workers and in June they are running still about 200 short of their goal. They went to Europe, again hoping to recruit 500 workers as they did last year, and were able to get only about 350. They increased the amount of subsidies for housing and for employee and employee family discounts. And they increased their season-end retention bonus by 50 percent; a worker receives $650 if he or she stays the full 14 weeks of the summer season. We hear similar stories from the other parks. Sea World and Geauga Lake contacts said that a significant number--about 1/5 of the total--of their concession stands haven't been opened and probably will not open this summer.

Bankers are reporting strong loan demand for all types of loans and in addition are expressing concerns about credit quality. Some of our examiners also are starting to say that they are seeing very early signs of things they are not comfortable with.

The ag sector is in very good shape in the sense that the planting was all done on time, conditions for planting were excellent, and since then we've had just the right amount of moisture and sunshine. So, as one said: All the farmers need to do now is sit and wait for a drought or a flood someplace else! But even the low crop prices are not restraining the price of farmland. One banker said that he has customers who recently have been acquiring new land at $2,000 to $2,500 an acre that will not produce cash flow of $1,000 an acre at current crop prices. So buyers are either counting on commodity prices to go up or they plan to use the land for something else. I'm not sure what the logic of that is. Also, for the first time in a while for us, we heard reports of foreign investors--Swiss and Canadians in particular--buying farmlands or even raw wooded lands. That may reflect capital preservation efforts on the part of some of the foreign investors.

Our Small Business Advisory Council described commercial real estate activity, particularly shopping centers, as booming. One referred to an "explosion" of orders in the spring for hot tubs and in-ground and above-ground swimming pools. The problem is that labor shortages make it difficult to get the work done. So he went to Miami to recruit 20 workers, some with families--he claims they have green cards--and besides moving them to Columbus, Ohio, he provided them with housing as well. We also heard reports of rising medical costs, all of that usual thing.

In the building sector, we were told that framing contractors weren't even bidding on some proposed new projects. Additionally, for some projects they had planned to start this summer it now looks as if they may not even start digging or preparing the sites. We did hear some reports, especially in machine tools, of some new orders coming in from Asia and Latin America. So that may be an early hint of positive developments there.

We were told that a number of fast food restaurants in both central and northwest Ohio are often now open for drive-through business only. They don't open the eat-in facility because of a lack of staff. So I assume that, quality adjusted, one might call that a price increase.

A director in the national retail trade business said that this year is going to be phenomenal and will go down as a banner year for retailer earnings. He said retailers are worried that they are going to go into year-end with stocks that are too low to meet what they think is going to be seasonally very strong demand for clothing and other nondurables.

We heard a lot of reports of food processing costs--refrigeration, transportation, container costs and so forth--rising fairly strongly. A director who specializes in came into this year expecting 800 number and Internet sales for all of 1999 to range between $300,000 and $400,000 but already had booked $5 million in such sales in the first five months of this year. Whether that is a reflection of aggregate demand or a shift in demand, I don't know. She feels that discretionary income is high and rising very rapidly.

Also, we heard reports that the structural steel industry is improving. Industry contacts said, in fact, that right now order books are full through the third quarter and that because of large construction projects, especially stadiums, they expect to finish the year with a full book.

Turning to the national economy, I wouldn't know what assumption to make about the fourth quarter of this year and the first quarter of next year in any case. While it is no doubt true that Y2K will foster some buying to accumulate stocks of various nondurable goods in particular, I don't know how I would go about making assumptions regarding consumer behavior or business expenditures for durable goods or plant or equipment or even recruiting and hiring decisions. If Y2K gets to be a media event with the degree of hysteria or concern about the future on the order of what we saw in the fall of 1990 looking toward Desert Storm and the Gulf War, we could have a very substantial negative impulse in the fourth quarter. And we would have to wait to see if that then reverses in the first quarter. I wouldn't know how to quantify the magnitude of that. I can see it going both ways. Also, if people want to enter the year-end period with a high degree of liquidity, that does imply, other things the same, a slower rate of spending for something. So Y2K may influence the balance sheets and cash flows of firms as well as of households in a way that I wouldn't know how to put into a forecast.

I have commented over the last year, year-and-a-half about the very rapid growth of personal income. In the spring of 1998 we were looking at Greenbook projections of personal income decelerating into the 3½ to 4 percent range and it has run 1 to 1½ percentage points faster than that. And that's great, as long as it stems from income that people are really earning based on what it is they produce. I heard last week--and I haven't had a chance to follow-up to see if it can be documented--that right now we're experiencing an inflow on the order of 1 million workers a year from foreign countries, augmenting the labor force. Now, as for how many of those are illegal and how many are permanent, I don't have any information. But the total is a very large number--much larger than I would have thought--and it certainly would contribute to rapid personal income growth.

We can see what the effect of the rapid growth of demand is on the domestic economy and, of course, we can see it in the rapid growth of imports at a rate that I certainly consider unsustainable. I take that as the strongest piece of evidence of excess aggregate demand in the domestic economy, and at some point that surely has to be reversed. So I do continue to be concerned about too much demand chasing what we're able to produce in the longer run in this economy.

I have a couple of comments on inflation. We continue to do research on various measures of inflation: We track the median CPI; we've also been looking at the regular CPI but using PCE weights. While the level of the latter measure may not be statistically significant, it has moved up appreciably. In the first five months of this year it ran right at 3 percent, even with the drop we had in May. Now, for the first time in a couple of years, that measure is running ahead of both the regular CPI and the median CPI that we track. So, that measure is another way of looking at the concerns about inflation that we have. All I'm saying about it at this point is that it's moving in an upward direction compared to what it has done in the last two years.

One more comment on inflation numbers: We began a project some time ago, and are building a track record now, with our own consumer price outlook surveys to compare with the Michigan survey's perceptions of current inflation and forecasts of future inflation. Our surveys have some different questions and a lot more detail in terms of the breakdown on respondents. First, both perceptions of current inflation and expectations about future inflation have moved up sharply. It's the direction that's important, not the levels, as far as I'm concerned at this moment. Some of the information that is starting to become available on the breakdown of income levels, education levels, males versus females we're not sure how to interpret. Consistently, females' perceptions of current inflation and future inflation run 1 to 1½ percentage points ahead of males' perceptions. We don't have an explanation for it. We even break the data down as to whether the respondent is a member of a household and whether he or she is working or not working outside the home. So, without getting into too much detail about levels right now, since the beginning of the year all of these measures have turned upward in each successive survey.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. Thank you, Mr. Chairman. When the Committee made the third of its three cuts last fall, which was the final one that brought the federal funds rate to the level we have today, it was a close, difficult call. After a good deal of soul-searching, that action was taken largely--and please excuse the use of this old war horse once again --as an inexpensive insurance policy, which could easily be reversed if the economy appeared to be too strong. Very soon thereafter what had at that time appeared on balance to be financially driven downside risks began to migrate. For a while, the risks appeared to be balanced, but more recently they seem to have moved ever more clearly to the upside.

Two groups of factors seem to me to be driving this change. For one, the world economy generally appears to have survived last fall's financial crisis and to be beginning to turn upward. This is a healthy and welcomed development, of course, but it does cause problems for U.S. monetary policy because several things that have helped our policy mix may well be changing. Our exports could increase, adding to already very robust economic activity. World commodity prices could firm; indeed, oil already has done so. The dollar's foreign exchange value could begin to weaken, adding further to exports and raising import prices in the United States. All of this is potentially inflationary.

Then there's our remarkably strong economy, which should slow on its own but so far has refused to do so. Consumer confidence is still sky high. Real wages are rising. Wealth continues to grow. Despite the recent hesitancy, the Dow Jones industrial average is up over 14 percent so far this year, and that's not too shabby. Consumption continues to increase at a rapid pace, led by the big-ticket cyclicals like autos and homes. Inventories are low and are likely to be a short-term source of further strength.

Clearly, labor markets continue to tighten as the economy strains to keep up the beat. So far, strong productivity growth has made it possible to do so without visible inflationary pressures. But it seems to me that it would be a dangerous assumption to be confident that this could go on indefinitely. Things have been and indeed remain wonderful. But there are limits out there somewhere beyond which could lie serious trouble.

Policy must, of course, focus one or more years out, not on today. And within the context of that time frame, I think we're quite possibly in the danger zone now and should begin to respond.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. I think the obvious question we've all been addressing or attempting to address in our own ways is: What has changed since the last meeting? In some sense I think not much has changed since then. The incoming data continue to point to vigorous growth, which may well be above trend and therefore is of some concern, I think, to everybody around the table. Consumers are clearly the major engine for this growth, as the recent personal income and consumption data amply indicate. And while PCE growth may slow at some point, it is not slowing yet.

The other side of this, as we all know, is that labor markets continue to be tight. The unemployment rate has been at 4.2 or 4.3 percent for three or four quarters now. That is starting perhaps, and I say perhaps, to spill over into compensation. Mike Prell's chart number 5 indicates that average hourly earnings of production workers decelerated a bit over the last twelve months compared to the previous twelve months. But if one looks more closely at the last three months--that is, the early part of this year--average hourly earnings seem to be picking up again to somewhere in the 4 percent range. This obviously puts into stark relief the importance of ongoing improvements in productivity.

There is continuing evidence that businesses are investing heavily in productivity-enhancing technologies. The recent shipments and orders data for communications equipment remain on a steep uptrend, as do the orders and shipments of office and computer equipment. The major issue, obviously, is whether or not this capital deepening will translate into further increases in the rate of productivity growth. On this issue I think there's anecdotal evidence on both sides, but the jury is out.

Against this backdrop of ongoing labor market tightness, there are a couple of conditions that may have changed. Here I'll say nothing new but I will reiterate what others have said. One change, obviously, is that the international environment is not as threatening as it has been for much of the last eighteen months. The staff forecast clearly shows some uptick. More importantly, in April our exports posted the first gain in six months. Two industries where weak foreign demand has depressed shipments--construction machinery and metal working machinery--both posted sizable increases in May. We've already talked a bit about commodity prices, so I will simply echo the view that it seems as though commodity prices have bottomed out; the evidence is broader than just the oil side of it.

Another perspective that I consider important is to look at how interest-sensitive sectors of the economy are behaving. Purchases of durable goods posted some healthy gains in May. I think the housing market is showing us a little of both strength and weakness here. The information in front of us indicates that sales of new homes and similarly sales of existing homes fell in May. But if one looks at more timely measures, such as builders' ratings of new home sales or applications for home mortgages, those have risen from April through June. So in addition to the auto sales that Governor Kelley referred to, there's some evidence of strength in other interest-sensitive sectors.

As Vice Chairman McDonough indicated, however, we're not here to slow growth. Nor are we here to destroy jobs or to destroy wealth. We should be looking for the earliest signs of inflation. We had a bit of a surprise in the CPI number for April, but I think we were wise not to put too much weight on that; as the subsequent numbers indicated, perhaps some of what we saw in April was a bit of a fluke. The early indicators of inflation are very hazy but all point in the same direction. I've talked about commodity prices and average hourly earnings. In addition, Mike Prell brought to our attention the PPI for intermediate materials, which moved up in March, April, and May--three upticks after declines in that index in each of the 10 previous months. There are a number of anecdotal stories about faster increases in prices and wages, as we've heard around the table. When I put all this together, it does seem to me prudent to take out a little insurance--to use that phrase--but not to react more strongly than the incoming information warrants. We can debate whether or not we see a wolf or a wolf in sheep's or dog's clothing or even the family dog, whichever it may be. But speaking of clothing, even in a balmy June it's important that the emperor not be seen in public without clothes whatsoever! [Laughter]

CHAIRMAN GREENSPAN. Try to top that, Governor Meyer!

MR. MEYER. That will be difficult!

I read the incoming data on demand and production as generally consistent with a slowdown to about trend growth in the second quarter but not at all definitive on whether we are in the process of a more sustained slowdown from the 4 percent rate of growth experienced over the last three years.

On the inflation front, the last CPI report reduced concern that we are already seeing a move toward higher inflation. But the recent pattern in CPI reports is consistent, in my view, with the interpretation that core inflation has now stabilized and that, therefore, the best inflation news is behind us. Concern that we may, in addition, be poised for an uptrend in inflation going forward comes mainly from the labor market, where there are some hints that demand pressures are now beginning to be felt in wage changes. This is the tone of the Beigebook. We also have the upward revision to the average hourly earning series and the rebound in the 3- and 6-month rates of increase in average hourly earnings in the last several months relative to the 12-month increase, following a period of deceleration. On top of this are reports of higher health insurance costs that are expected to boost the employer benefits component of the ECI going forward.

The change in the Greenbook forecast, while not dramatic, certainly is in the direction of supporting the case for a higher federal funds rate target. While I thought the rhetoric of the Greenbook was modified somewhat more than the forecast, I appreciated both changes. The 0.4 percentage point increase in core CPI in 2000 relative to 1999, the 2.7 percent core CPI inflation rate in the fourth quarter of 2000, and the momentum toward still higher inflation thereafter are the central stories in the Greenbook. This is consistent with my own concerns.

Now, at Humphrey-Hawkins meetings, the staff also offers an extended forecast. This puts us in a better position to consider the longer-run path of monetary policy that is consistent with our policy objectives, rather than focusing exclusively on the decision about the target for the funds rate between today and the next FOMC meeting. This also provides an opportunity to consider the inflation risks associated with initial conditions in terms of current utilization rates and the prevailing momentum in economic growth.

Let me note some of the important features of this extended forecast. Despite the 50 basis point tightening over the Greenbook horizon and the cumulative 150 basis point tightening over the extended forecast horizon, inflation moves up measurably. And the rise in inflation may be steeper than it appears on the surface. The reference price index is the PCE, which has been running and is expected to continue to run about ¾ percentage point below the CPI. The rise in the PCE inflation rate from just below 1½ percent this year to just above 2 percent by 2001 and to a peak later of about 2½ percent translates into an increase in core CPI from 2 percent over the last 12 months to about 2¾ percent in 2001 and a peak of around 3¼ percent. Add another 0.6 to 0.7 to put this number on a methodologically consistent basis with a 3.1 percent increase in core CPI over 1995. I think this helps to underscore the point I made at the last meeting: That there is a danger that we could squander a most extraordinary set of disinflationary forces over the last several years and allow this episode to be a transition to higher rather than lower inflation.

The Greenbook forecast and my own, of course, reflect key assumptions about trend growth and NAIRU. Our forecasts have admittedly been very poor over the last few years. There is no question that there is an unusual degree of uncertainty on all counts. But the reasonable possibility of a significant rise in inflation is a concern that I will weigh in my monetary policy position tomorrow morning.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. We're being increasingly admonished to fight inflation and not real growth. I wish it were that simple. Everybody loves growth. It improves living standards and a consonant growth in overall liquidity keeps inflation low. But even though growth is desirable, a nation can have too much of a good thing. If there is little economic slack as measured, say, by unemployment and discouraged workers, and if there are lags in monetary policy, the main way the Fed can control inflation is to control growth--that is, to keep the prospective growth in aggregate demand close to that of aggregate supply.

To make a judgment of whether it is close, we must rely on forecasts. Even with an upward shift in productivity growth, a reasonable forecast for growth in aggregate supply over the next few years is around 3 percent, perhaps a bit above. A forecast for demand growth is harder to come by, and the staff's has certainly not been perfect. But the staff has learned from its misses and has incorporated those lessons into its new forecasts, so I'm willing to assume that they are now probabilistically unbiased. The baseline forecast that many of you referred to does already include a higher federal funds rate. The version that I prefer of the staff forecasts assumes no change in the funds rate. This shows that the forecast growth in aggregate demand is coming in above that of aggregate supply. Even including the flat Y2K quarter, the average growth in real aggregate demand in the unchanged funds rate version of the forecast is 3.3 percent over the next year-and-a-half; taking out this flat quarter, it rises to 3.8 percent. The true estimate is probably somewhere in between the two. This is not a huge supply/demand imbalance, but I think there is some imbalance.

Since the forecast begins at a time when resources are tight, forecast inflation gradually accelerates by about ½ point per year in 2000 as opposed to 1999, with more acceleration in later years. Roughly the same pattern is shown in the Blue Chip forecast. This acceleration has been a standard, though largely unrealized, feature of the forecast for some time now. I've always been worried about it, but I'm getting a little more so lately for five reasons. One is that the long-awaited natural slowdown in the U.S. economy seems not to have materialized. Second, the world economy is beginning to recover. Third, commodity prices have stopped dropping and may even be turning up. Fourth, there are now more tight labor market anecdotes than before in the Beigebook and elsewhere. Fifth, there are early if intermittent signs of acceleration in prices and even a touch in wages. After a long spell, it may now be time to worry about the gradual acceleration of inflation and to think about tightening policy.

The same suggestion is given by targeting rules. A forward-looking inflation targeting rule would tell us to tighten. A forward-looking nominal income targeting rule would tell us to tighten. If the real interest rate is in the neighborhood of 3.8 percent, which is taken from the possibly biased TIP market, the nominal funds rate is probably too low from a long-term standpoint. None of these indicators is perfect, but all are starting to point in the same direction.

Let me step ahead and talk about the "tap on the brakes" issue. Should there be a slight tap on the brakes or a stronger tap? The argument for a slight tap is that there is still a great deal of forecasting uncertainty in all of this and there is still time to make future changes if new data confirm our suspicions. Until we see the whites of the eyes of inflation, premature Fed moves do not let the new high productivity American economy reach its full potential. The arguments for a stronger tap are that the present funds rate may be too low by more than a slight amount, that it is difficult to raise interest rates, and that there are lags both in monetary policy and in the inflation process. In being too cautious and not taking advantage of windows of opportunity, delayed Fed moves let inflation heat up again after years of painful sacrifice to bring it under control. I'm not going to say where I am on this except to say that these were years of painful sacrifice. [Laughter]

CHAIRMAN GREENSPAN. We will now adjourn until 9:00 a.m. tomorrow morning. Before we do, let me just remind you that the forecasts that you've submitted to Mike Prell are subject to revision, as you know. He would appreciate having any changes in your forecasts by close of business on Wednesday, July 7.

[Meeting recessed]

Wednesday, June 30--Morning Session

CHAIRMAN GREENSPAN. Mr. Madigan, you have the floor.

MR. MADIGAN. This briefing provides background for your review of the ranges for money and debt for 1999 and your decision regarding provisional ranges for 2000. I'll be referring to the charts and tables from the Bluebook that have been distributed separately to you this morning in a package labeled "Staff Presentation on Money and Debt Ranges." [3]/

Last February, the FOMC reaffirmed the growth ranges for 1999 that were chosen provisionally one year ago: 1 to 5 percent for M2, 2 to 6 percent for M3, and 3 to 7 percent for domestic nonfinancial sector debt, shown in Chart 1. The Humphrey-Hawkins report in February noted the FOMC's continued uncertainty regarding appropriate rates of money growth in the intermediate term and stated that the Committee intended the monetary ranges to be benchmarks for growth under conditions of price stability, sustainable economic growth, and historical velocity relationships. In addition, the report pointed out that the monetary aggregates could exceed their ranges during 1999.

As shown in the top panel of the chart, M2 has indeed been running above its range so far this year, with growth through June at a 6¼ percent annual rate. M3 growth for the year to date has been about 6 percent at an annual rate, just at the top of its range. Debt, by contrast, has been comfortably within its range.

The relatively rapid expansion of M2 this year importantly reflects the brisk pace of nominal income growth. In addition, it has mirrored a further decline in V2, shown by the solid line in the top panel of Chart 2. To a small degree, the decline in V2 over the first half of this year probably was a lagged response to the drop in opportunity cost--the dashed line in the upper panel--late in 1998 following the easings of monetary policy. In the middle panel, the lower solid line, labeled "Fit from 1959:Q2 to 1989:Q4," shows the historical association between opportunity cost--the horizontal axis--and V2, the vertical axis. Points corresponding to the experience over the period since mid-1994 are shown in the box and are repeated in magnified form in the lower panel. That scatterplot suggests that the demand for M2 may retain an interest sensitivity somewhat similar to that apparent in earlier decades.

Since its peak in mid-1997, however, V2 has dropped considerably while this measure of opportunity cost has changed little on net. We can't pin down the reasons for the downtrend, but it seems reasonable to suspect that wealth may be playing a role. Large stock market gains have boosted wealth but have left portfolios skewed toward equities. As investors, in response, have diversified some of their wealth into other assets, such as deposits and money fund shares,

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

M2 has been growing more quickly than nominal income. Nonetheless, econometric studies have not identified a clear role for wealth in M2 demand, and considerable uncertainty continues to surround the determinants of M2.

Chart 3 shows the velocity of M3 in the upper panel and the velocity of debt in the lower panel. In 1999 V3 has continued to drop at a pace a bit quicker than its trend from 1960 to 1985. The velocity of debt has remained roughly flat, as was the case before the mid-1980s.

Table 1 summarizes the staff projections for 1999 and 2000. As shown in the third column, M2 is projected to expand 6 percent over 1999, outpacing the 5¼ percent gain in nominal income forecast by the staff in the Greenbook and the similar central tendency of income growth in your own forecasts. The projected decline in V2 reflects an assumption of continued, albeit diminishing, portfolio influences and a small boost to M2 demand from Y2K concerns. These effects are partly offset by the assumed tightening of monetary policy this year. Next year, M2 growth is expected to slow further to 5 percent, owing in part to the deceleration in nominal income, which is anticipated by your own forecasts as well as the Greenbook. A reversal of the Y2K effects and the continued fading of the portfolio effect on money demand, given the projected leveling-out of the stock market, also contribute to M2's expected deceleration.

M3, the second line of the third column, is forecast to expand 6¼ percent this year. The sharp slowing from last year's pace of nearly 11 percent mainly reflects a steep drop-off in bank credit growth after the surge that resulted from last year's market turmoil. Next year, M3 growth is seen as edging off to 6 percent, with the effects of the deceleration in M2 being partly offset by a strengthening in bank funding needs as bank credit picks up some.

Domestic nonfinancial sector debt is projected to expand 5½ percent in 1999 and 4¼ percent next year, about in line with nominal income. The contraction in federal debt steepens, owing to the widening budget surplus, while nonfederal debt expands briskly, again outpacing nominal income, although it does slow.

Table 2, on the following page, shows the two sets of ranges for money and debt presented in the Bluebook for Committee consideration. Both sets were developed under the presumption that the Committee would wish to retain its current, long-run price-stability rationale for the monetary ranges and the current projection rationale for the debt range.

Under Alternative I, the Committee would keep the existing ranges for 1999. The ranges for M2 and M3 under this alternative are centered on growth rates that would likely prevail under conditions of price stability and historically typical velocity behavior, with a trend in potential GDP more in line with performance earlier in this decade--before the apparent recent improvements in

> productivity growth. For instance, the M2 range of 1 to 5 percent under Alternative I would be consistent with potential real GDP growth of 2½ percent, the staff estimate of ½ percentage point bias in inflation measured using the GDP deflator, no true inflation, and flat V2. Under this alternative, the same monetary ranges presumably would carry over to next year since the underlying assumptions would be unchanged.
>
> By contrast, the monetary ranges for Alternative II are designed to be consistent with an expectation that the stronger productivity gains of the past year or so will persist, with implications for more rapid growth in potential GDP. The M2 range of 2 to 6 percent could be roughly consistent with potential GDP growth of 3¼ percent, as in the Greenbook, the staff estimate of ½ percentage point bias in inflation using the GDP deflator, near price stability, and flat V2.
>
> For domestic nonfinancial sector debt, the Committee has not applied the price-stability rationale but instead has selected a range that has been approximately centered on its expected growth. Consistent with this approach, both alternatives propose ranges for debt that are roughly centered on staff projections. With the staff forecasting debt growth for this year of 5½ percent, the existing 3 to 7 percent range would still be approximately centered on the expected outcome. Given the staff's projection of a slowdown in debt growth next year to 4¼ percent, the Committee might want to consider reducing the debt range to 2 to 6 percent on a provisional basis for 2000 as proposed in both alternatives. As it happens, such a range would be the same as one based on price stability considerations under the assumption of more rapid growth in potential GDP that is the basis for the Alternative II monetary ranges.

CHAIRMAN GREENSPAN. Thank you. It strikes me that we have an interesting dilemma, which is merely a variation of the ones we've had previously, and that is to try to maintain a set of monetary growth ranges that we perceive as consistent with price stability. That problem was easy to deal with when we were talking about stable trend productivity growth; when that didn't vary very much it was easily interpretable into potential GDP and into specific money ranges. The issue that has been raised here, obviously, is an important one. If our true evaluation were that we needed to find the particular set of ranges that is consistent with price stability, the argument would have to be that we should raise the ranges.

The only problem I have with doing so is that for some reason--mostly luck, I guess--we have managed to take this whole issue off the table completely. If we change the targets and we try to explain why, what of necessity is going to come out in the explanation is that we have changed our structural productivity growth measure from 1 to 2¼ percent, and that is something we have avoided doing.

I would be inclined to stay where we are, but in the Humphrey-Hawkins testimony in which this is discussed allude to the fact--since there will be other elements of the Humphrey-Hawkins report covering the issues of productivity and potential--that clearly these are minimal targets. The language would somehow suggest that these are not quite right but they're not that important. Were we to change them, we would only be changing them by a relatively small amount, which would not look all that much different on the charts. If you visualize what we're looking at, it's really not going to matter that much. All we would be doing if we change them, as far as I can see, is to open us up to discussing what the staff's trend productivity number is and then we'd get involved in defending it or not defending it. I feel like the politician who spends most of his time trying to avoid having certain questions asked. This is one of those questions I would just as soon not have raised because I think there are differences of view among the people in this room and it would serve no useful purpose of which I'm aware to get into this discussion.

So, my personal preference is to stay where we are because I don't see that much has changed since the February meeting. Obviously, I don't feel strongly about it because one can't feel strongly about this [laughter]--and we shouldn't. That's my general view and I'd be curious to get reactions from everybody else.

MR. BOEHNE. I think your advice and recommendation are right on target. I think we ought to keep this off the table. We have enough difficulties explaining where we are and what we are trying to do with monetary policy; it would serve no purpose to confuse matters with this unimportant issue now. So, I support your recommendation.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, on this issue I feel strongly only about one thing and that is that the fellow who has to go up and explain this should have the option of deciding what he wishes to explain or not explain. Therefore, I support fully your recommendation.

CHAIRMAN GREENSPAN. I thank you, sir. President Moskow.

MR. MOSKOW. Mr. Chairman, I agree completely. I don't think it serves any useful purpose to open this up to a wide range of discussion at this point. So, I agree with your recommendation.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. I totally agree with your recommendation. There is one thing I feel strongly about and that is not conveying the sense to the world that we have a settled notion of what long-term trend productivity is now.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Mr. Chairman, I strongly support your views on this. Another consideration, given the importance of the monetary aggregates in our decisionmaking, is the less said about them the better. [Laughter]

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. I agree with your recommendation of not changing the ranges. As far as discussing it in the Humphrey-Hawkins testimony, and perhaps as a way to initiate more public dialogue about these issues, I would ask that some weight be given to the idea that in industries where we know productivity gains have been extraordinary--in the computer and communications industries, for example--prices are falling, as they should. And the wealth gains to businesses and households are manifested in an increase in the purchasing power of money because those prices are falling. The idea of price stability more broadly means that we would then accept more rapid increases in prices in other areas where there are no productivity gains so that the average stays the same, and it's not clear to me that that's optimal.

CHAIRMAN GREENSPAN. That is a very important point. In fact, that's the issue I raised last night with Eddie George: What is a true, stable price level? In other words, is a stable price level one that is conceivably going down at a measurable and known rate provided the rate of return on investment is stable? Obviously, price stability per se becomes a much more complex question when we get into this technology area. We're using price stability, as best I can judge, as a general proxy with that caveat in it--at least I hope we are.

MR. JORDAN. I hope so, too!

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. I think the Vice Chair put it well. I support your recommendation.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Mr. Chairman, I agree as well. In addition to the arguments people have made, another matter is the timing. We may be in a period--we'll see in a few minutes--where we want to underscore our commitment to a low inflation policy. And to raise the targets at that same time might send a message to some people that we have a greater tolerance for--

CHAIRMAN GREENSPAN. We would have to explain it.

MR. GUYNN. I certainly agree.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. I agree with your recommendation.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. I, too, agree with the recommendation, although I do think this raises an interesting question, mostly for the longer term. As a matter of logical consistency, if we do become convinced at some point that trend productivity and therefore trend output have accelerated, I think we are going to have to make an adjustment. But I don't think this is the point.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Me too!

CHAIRMAN GREENSPAN. That's ungrammatical! [Laughter]

MR. FERGUSON. I as well. [Laughter]

CHAIRMAN GREENSPAN. Well done! President Broaddus.

MR. BROADDUS. I as well.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Let sleeping wolves lie. [Laughter]

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. I concur, Mr. Chairman.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Yes.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Yes.

CHAIRMAN GREENSPAN. Why don't we have a single vote then? Will you read the paragraph?

MR. BERNARD. This language is shown on page 21 of the Bluebook: "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 reaffirmed at this meeting the ranges it had established in February for growth of M2 and M3 of 1 to 5 percent and 2 to 6 percent respectively, measured from the fourth quarter of 1998 to the fourth quarter 1999. The range for growth of total domestic nonfinancial debt was maintained at 3 to 7 percent for the year. For 2000, the Committee agreed on a tentative basis to set the same ranges for growth of the monetary aggregates and debt, measured from the fourth quarter of 1999 to the fourth quarter of 2000. 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. Shall we vote?

MR. BERNARD.

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

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

MR. KOHN. Thank you, Mr. Chairman. The long-run strategies section of the Bluebook highlighted two potential imbalances shaping the U.S. economic outlook. One, the domestic saving/investment imbalance and the related current account deficit, has been a continuing concern to policymakers. Although the contrasting cyclical circumstances between the United States and the rest of the world have exacerbated the current account deficit in recent years, the deficit and the saving/investment imbalance importantly also reflect the pickup in productivity growth here. That pickup has boosted wealth and permanent income, encouraging our residents to cut sharply their saving out of current income; foreigners are willing to supply the added saving needed to fund domestic investment because that investment has such high rates of return. The process is not sustainable: In the United States, saving is so low that the wealth-to-income ratio will begin to decline once capital gains abate; abroad, portfolios are becoming increasingly weighted toward dollar assets. There is little monetary policy can do to speed the adjustment. Tightening policy, for example, would damp income but appreciate the dollar so as to have modest net effects on the current account.

The issue for policymakers is what price changes will be put in motion as this imbalance begins to correct itself. Once productivity growth levels out, current income will begin to catch up to permanent income; and domestic saving out of that current income will increase, reducing the equilibrium real interest rate in the United States and the dollar's real exchange rate. The latter would help to sustain demand in the United States and to contain the current account deficit. The role of monetary policy, if all goes smoothly, would be to lower the short-term interest rate, following the equilibrium rate down. However, events do not always go smoothly. There may be scope for alternative policies, depending on the way the dollar falls and how foreign investors react and on cyclical circumstances in the United States and foreign countries. Portfolio shifts away from dollar assets, for example, would call for a firmer monetary policy, as would downward pressure on the dollar from unexpected strength in foreign economies and their interest rates.

The second imbalance highlighted in this section of the Bluebook has more immediate monetary policy relevance--and that is the possible imbalance in the labor markets. Behind the staff forecast and baseline extension is a judgment that the unemployment rate is now about a percentage point below its sustainable level and that the real federal funds rate is more than a half percentage point below its equilibrium level. Structural productivity growth is projected to remain at its recently elevated level of 2¼ percent. However, because productivity growth does not accelerate further, the effects of the overstretched labor market will begin to be felt. The rise in the nominal federal funds rate assumed for the second half of 1999 only prevents the real funds rate from declining over the forecast horizon. As a consequence, the imbalance in labor markets persists, and inflation continues to accelerate in 2001.

The two long-run strategies presented in the Bluebook both deal with the economic and policy disequilibrium by raising the nominal federal funds rate 1½ percentage points. If the increase is rapid, before inflation has a chance to pick up much, the real funds rate rises quickly and by enough to put significant slack in the economy, which counteracts the inflation pressures now in train and ultimately produces price stability. If the increase in the nominal funds rate is spread over three years, as in the baseline strategy, the pickup in inflation over this period implies that the real funds rate rises more slowly and only by enough to return the unemployment rate to the NAIRU, capping PCE inflation at the 2½ percent level.

Revisions to the assumed NAIRU and to potential GDP growth have been unusually large in recent years, responding in part to overprojections of inflation. This experience suggests that uncertainty about the specifications of the supply side of the economy in the staff forecast and its extension might be quite sizable. The studies you received by Orphanides and by Orphanides, Porter, Reifschneider and Tetlow highlighted the extent to which estimates of potential, and hence the gap between actual and potential output, have been revised over the years. They also addressed the influence on appropriate monetary policy of uncertainty about the measurement of potential. They concluded that, because reacting appreciably to mismeasured output gaps will tend to add to variations in both output and in inflation, faced with such uncertainty you should reduce your response to estimated output gaps, with the reduction increasing more than in proportion to the degree of uncertainty. As the authors note, the Committee in fact appears to have been doing this in the past two years. Except when you are extraordinarily uncertain, however, the estimated gap should receive some weight in your policy deliberations. One alternative in response to uncertainty is not giving the level of the gap any weight in your policy reactions and instead paying attention only to the growth rate of nominal GDP relative to a targeted growth rate, which reflects a change in the output gap and inflation. This is a risk-averse strategy--very similar to monetary targeting when velocity is well behaved--which may be less than optimal, but would avoid large mistakes if the output gap turns out to be substantially different than perceived when policy decisions are being made.

This research suggests that in a situation where the Committee is rather uncertain about the true level of labor resource utilization, it might attach the highest priority to seeking growth in the economy that would maintain the prevailing level of labor utilization unless evidence begins to accumulate that this level of utilization is inappropriate. To put this in practice in the current situation, the Committee would want to set its policy stance to provide some assurance that labor markets will not become tauter, but not necessarily to seek some easing of labor market pressures. Under this cautious approach, however, if the Committee began to see signs that cost and price pressures were emerging, tending to confirm suspicions that the economy was producing beyond its potential, it would want to react promptly and decisively.

The Committee would need to make the determination of how much tightening is needed to bring the growth of aggregate demand back down in line with the expansion of aggregate supply. In this regard, is taking back the 75 basis points cumulative easing of last fall necessarily a good benchmark for policy going forward? To be sure, the market disruptions and tightening credit conditions that the easier policy was designed to offset have largely abated, and the real funds rate remains lower than it was last summer despite only modest net changes in unemployment and inflation rates since then. Moreover, when the

Committee eased, it was motivated in part not by the most likely economic forecast, but rather by the perception that the risks to that forecast were seriously skewed toward the possibility of major disruptions in global financial markets and foreign economies. The evening out of the distribution of those risks, without any other change in the forecast, would argue for some firming of policy. Finally, a reluctance to reverse course now, when market conditions have improved and labor market imbalances threaten, might make the Committee more hesitant in responding to rapidly deteriorating economic or financial conditions in the future.

So, changing circumstances since the Committee last eased do provide a rationale for tightening, other things equal. But much has changed since last summer, with complex implications for the inflation outlook. Notably, even more rapid productivity growth has held inflation down despite a robust economy, and in financial markets credit conditions and bond yields are higher, while on the other side equity prices have risen as well. Moreover, the real funds rate last summer was not necessarily at its optimal level. Just as in 1988, the degree of any eventual firming should not be keyed to the size of the previous easing, but presumably would depend on the economic situation and the Committee's objectives--and could be more or less than 75 basis points.

In the staff forecast, a fairly modest firming of the federal funds rate--50 basis points over the second half of the year--is sufficient to slow growth to a bit below the rate of growth in potential output, at least for a while. If it turns out that growth in potential output is higher because productivity continues to accelerate, real GDP need not moderate so much to stabilize labor utilization. But that more vigorous productivity performance will also likely induce stronger demand growth than projected by the staff as profits and equity prices are boosted. In that circumstance, some further policy firming may still be necessary to keep labor markets from tightening.

Data becoming available since the last meeting do not suggest an economy or inflation process gathering the sort of steam that would require a sizable backup in rates to contain. In fact, economic expansion is estimated to have slowed in the second quarter to around the pace of its potential. Though compensation trends may be a bit less favorable than expected, 12-month changes in average hourly earnings remain damped and CPI inflation is probably a little lower than many on the Committee had feared at the last meeting. Financial flows also do not suggest an accelerating pace of spending. Money growth seems to be on a slightly slower track in recent months, even after allowing for the give-back of the surge of late last year, and credit growth continues to average in the neighborhood of 6 percent. Moreover, the recent growth rates of aggregate demand and of money and credit do not reflect the backup in interest rates of the last two months, which is too recent to have had much effect yet.

Still, the signs of slowing are tentative, and, if labor markets are in the process of tightening further, the longer the slowing is delayed, the more cost and price pressures will build. Under these circumstances, the substantial easing of financial conditions that would follow a decision not to validate at least the first policy-firming step already built into markets could be counterproductive. Hence, even a cautious approach to preemptive policy might suggest a 25 basis point increase in the federal funds rate to assure better that aggregate demand will rise no faster than aggregate supply.

In addition to its decision about the stance of policy immediately after the meeting, the Committee also needs to consider its posture going forward. Such deliberations have always played a role at your meetings, but their importance has been heightened by the Committee's policy of giving a public rationale for its action and by the option to announce changes in the tilt of the directive. Beyond the action you choose today, there are three mechanisms available to convey your message to financial markets: the wording of the accompanying announcement, the tilt to the directive, and the tone of Chairman Greenspan's Humphrey-Hawkins testimony in three weeks. How you mix and match from these possibilities will importantly shape how markets react to your direct action and to the data releases and other events in the weeks that follow.

If the Committee were concerned that a cautious approach to policy firming posed unnecessary risks that inflation would end up higher than was consistent with the good performance of the economy, it might see, and want to indicate, the possibility of an appreciable increase in the federal funds rate. An example is the price stability alternative and the incorporated 150 basis points of tightening in relatively short order. Even if the Committee were not intent on conducting policy over coming quarters to achieve literal price stability, it might have doubts that a less aggressive policy, as in the baseline, would serve even to cap the rise in inflation at a reasonable rate. These concerns would be heightened if the Committee were skeptical that the growth of aggregate demand would slow as in the staff forecast because, for example, such a slowdown depends on a leveling out of equity prices. Furthermore, the Committee may have sufficient confidence that a 4¼ percent unemployment rate is unsustainably low that it wishes to take strong, prompt actions to ease pressures in the labor markets before inflation begins to pick up.

In these circumstances, the Committee might want to consider a 50 basis point increase in the intended federal funds rate, or a 25 basis point rise today with the strong presumption of a like rise within a few months. Such sentiments would be accurately reflected in an asymmetrical directive and perhaps in heightened inflation concerns expressed in the associated announcement and testimony. Any backup in rates this combination would cause would contribute to achieving the Committee's objective, given its view of the need for forceful action to contain inflation.

The choice of the tilt in the directive is less clear-cut if the Committee were to take a more measured approach to preemptive action in light of aggregate supply uncertainties. The Committee might still suspect that another tightening will be needed this year just to align the growth of demand with that of supply, as in the staff forecast. A reasonably strong presumption in this direction, and a sense that such a tightening is a real possibility in the next few months might lead the Committee to adopt an asymmetrical directive. The asymmetry would not come as a surprise to market participants, who would examine the announcement especially carefully for indications of whether your asymmetry extended beyond the next firming.

But if the Committee saw that next action as somewhat uncertain--quite dependent on incoming data and not a precursor to a more extended series of firmings absent more concrete evidence of stronger oncoming inflation--it might want to adopt an untilted directive. Such a directive might also have some appeal because, by reducing the sense that action was imminent, it might help to forestall a market dynamic that risked building in stronger expectations of near-term firming than the Committee found comfortable. It would not preclude the Committee's giving its views that it continued to need to be especially wary of the potential for increasing inflation. And the expression of such concerns in the announcement and reinforced in the Chairman's testimony would help to limit any market rally that tended to emerge from moving to a balanced directive.

CHAIRMAN GREENSPAN. Questions for Don?

MR. MEYER. Could I ask about the change in the saving rate and the equilibrium interest rate that you talked about in the earlier portion of your remarks? Your comments seemed to imply that you do not perceive the current saving rate as the ultimate equilibrium rate and that you believe saving is going to move back toward the equilibrium rate. I'm wondering if that's really true. As I look at the extended simulations--and I can't be sure of the data that I have--that's not the story I see. To me the story in the extended simulations is that we have a decline in the wealth-to-income ratio and that the decline in that ratio leads to the readjustment of the saving rate. So it's really a question of whether the equity market is in equilibrium today. If the equity market isn't in equilibrium today, as it moves back into equilibrium it brings about that change in the saving rate. Is that what's going on?

MR. KOHN. I think it's all part of the same phenomenon. The wealth-to-income ratio declines for a couple of reasons. One is that equity prices don't rise so rapidly relative to current income. There is a projected flattening out in the next two years, as you know, and very modest increases thereafter in the equity wealth-to-income ratio. But it's more than that because it's not only the behavior of the stock market, it's the fact that people are not saving enough out of current income. We, the residents of the United States, are not buying enough of this wealth that's being created to keep our wealth-to-income ratio from falling at the current saving rate. So I think what happens here is that in a sense the growth in productivity levels out and this helps to level out the stock market because we don't have the continued capital gains and rise in profitability.

It also brings current income up to permanent income. All those things work together to raise current saving out of income. So, the flattening of the stock market, the leveling out of the growth rate of permanent income, the catch-up of the growth rate of current income, and the increase in the saving rate are all a part of the same phenomenon, which is basically the leveling out in the growth of productivity. I think one could look at it either way: That the wealth-to-income ratio is falling and that's why people save more, or that the wealth-to-income ratio is falling in part because people save so little and that induces them to increase their saving.

MR. MEYER. What about the equilibrium interest rate? We had some discussions previously about the role of the increase in the productivity trend in raising the equilibrium real interest rate. It levels out but at a higher level.

MR. KOHN. Right.

MR. MEYER. How do we sort that out in terms of what happens to the equilibrium rate when all is said and done?

MR. KOHN. Well, when all is said and done, it ought to be at a higher rate than it was four years ago.

MR. MEYER. Okay.

MR. KOHN. But it ought to be at a lower rate than it is currently given the low rate of saving out of income and a very rapid rate of investment. As productivity growth levels out, investment tends also to level out. So the equilibrium interest rate should be lower later than it is now and on a downtrend as saving picks up, but at a level that's higher than it might have been 5 or 10 years ago.

MR. MEYER. Thank you.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Don, I am going to try to ask this question clearly. In the Bluebook and in your comments you touched on a couple of issues. One was whether we need to move 50 basis points over the course of this year and then how we might go forward from there. My question is: If one were to assume for the moment that we will need to move 50 basis points, what is the best way to go about that? If we say 25 basis points now, assuming we move at all, that would create uncertainties regardless of the tilt of the directive we adopt. A symmetric directive would give a false sense to the market and to Main Street that we're satisfied with that 25 basis points, and things would begin artificially moving forward again. If we say 25 basis points, asymmetric, that would raise uncertainty as to how much and when the next move will be. If we say 50 basis points, symmetric--suggesting that is sufficient at least for now--would that create more disruption because it's larger than the market expects? Or would that settle the market in the sense of saying, "This is what we're doing and it's enough"?

MR. KOHN. If you were confident that you needed to move 50 basis points and it wasn't really dependent on the incoming data over the next couple of months, I don't think there would be anything gained by doing 25 now and waiting to do 25 later. So, in the case where you were confident that you needed to do 50 and didn't want to see more data, then you ought to do 50 and announce symmetry. I think initially the market would be very surprised and there would be a reaction. Depending on the announcement, the market might tend to build in a lot more tightening later. You would have to be very clear in the announcement that this is it for a while, as the ECB tried to do. I think those announcements are tricky. You don't ever want to tie your hands for very long after you've made a move. You don't know what's coming next.

The sort of in-between situation is the one where you're fairly confident you need to do 25 now and you're not that confident about the next 25. If you're reasonably confident about the next 25 and see its likelihood as pretty high--it would take some unusual data to dissuade you and you're planning on doing the additional 25 at the next meeting or the meeting after that--I think asymmetry would accurately represent your views. The market would get wound up and build that tightening in, at least after its experience during the last intermeeting period, especially if its expectations were confirmed at this meeting. And that would be okay because in this in-between situation you actually do intend to do that next 25. But if you were less certain--if you thought the next 25 might be necessary but you weren't sure when, and if it were highly dependent on the information you'd be getting over the next couple of months--then you might be concerned that doing 25 plus putting in the asymmetry would end up creating expectations of a further move. You would come to the August or October meeting with these high expectations embedded in the market but you might not want to move and you'd have given the market a false signal. The other option I tried to put on the table is that of going to symmetry and trying to calm things down a little--not creating strong expectations of a move at the next meeting. But in addition you could indicate in the announcement and in the Humphrey-Hawkins testimony that your major concern was still on the side that inflation pressures might be building and you might need to move. You just weren't so sure about that and, therefore, you didn't put in the asymmetry.

MR. HOENIG. Thank you.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Don, I have a question about the long-term simulations. Both of them indicate that there is a lot to do in terms of policy in the next year or two to reach our objectives. Since obviously we don't have much detail here, I was interested in hearing your views on the impacts of the alternative simulations relative to where we are today on such things as the stock market, the bond market, the foreign exchange market, and other vulnerable economies in the world. It seems to me that with the kind of policy changes indicated in either of those alternatives, but particularly in the price stability one, those impacts could be very significant. My experience would be that a long-run simulation isn't going to pick up much of that. The other point, somewhat on the other side, is that if we moved according to the price stability alternative, it's conceivable that we could see the sacrifice ratio change as well because such a move would be a very dramatic indication of our resolve with regard to monetary policy. As you put these simulations together, did those kinds of considerations come up?

MR. KOHN. Let me take the second one first. We have built in a market learning process in the price stability alternative. The public, not just the markets but businesses and households, learn about this over about two years. So in some sense the actual goal is phased in and then the markets' learning about it is phased in. We smooth that through, but it is there. So whatever the Committee is targeting, markets and households do perceive it. It just gets built in gradually. The gradual adjustment of the funds rate differs from an even sharper increase in the funds rate in the near term that would be indicated by the Taylor rule. So there is total credibility here. It happens over a couple of years, but it's built into the forecast. Unlike the old MPS model, which was totally backward-looking, this has forward-looking expectations and the credibility effects get built in.

MR. PARRY. I see.

MR. KOHN. It obviously includes effects on exchange rates and the stock market and that sort of thing. But what it doesn't include is some nonlinearity, shall we say. It doesn't take into account some unusual reactions that might occur because foreign economies, say, or even domestic financial markets are unusually nervous or unsettled at this point and might be more subject than they have been historically to a very sharp, sudden move in Federal Reserve policy. Basically this builds in how all these markets have reacted on average over time. We did not deviate from that. We did not in our simulations take account of the fact that the current state of the world may not be equal to the average over history and that reactions might be very much stronger in certain situations.

MR. PARRY. Okay, thank you.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. Don, the discussion about wealth, permanent income, measures of income and savings and all that in a domestic context is certainly very important. We're seeing more focus not on the creation of wealth but on the sharing of the wealth in a domestic context. We saw in the Chairman's JEC testimony recently some questions related to that--for example, is everybody participating equally? These are important comments, politically driven important comments. When the context is broadened to the global economy, the issues become much more complex in that the United States has been creating a great deal of wealth in recent years. We have our own interests about sharing the wealth and the distribution of income. But in a global context, in most of the places where we look at wealth and measure it we would say that they have been destroying wealth. The effect of the destruction has been most severe on those with lower incomes--Latin America, Asia, and so on--worsening their income distribution.

Now, suppose the rest of the world, not only the old industrial world of Europe but Asia and Latin America, starts to get its act together a bit, or maybe a lot--whether that involves the enforcement of property rights, tax reform, tax reduction, or deregulation--and they start getting the keys right to create wealth. Suppose they also address some of their other problems about the distribution and sharing of that wealth. Under circumstances where the rest of the world finally starts to perform well, what implications do you see for the United States?

MR. KOHN. This is similar, in my mind, to what Karen was showing in the Chart Show yesterday--that is, the possibility of a portfolio shift in which dollar assets become less attractive relative to foreign assets, not because dollar assets are less attractive but because foreign assets are more attractive. From your perspective on the Committee, this might tend to accentuate any decline in the dollar. It would look like a portfolio shift against the dollar. In fact, it would be a shift in favor of foreign assets, but it would be a relative portfolio shift. It would put downward pressure on the dollar. And perhaps even in this very benign scenario of rising saving and downward pressure on equilibrium interest rates in the United States it would mean that you would need to have a less marked easing of policy as things corrected, or even a tightening of policy.

Obviously from a global perspective this would be a positive development for the world. But it would mean that the United States would stand out less from the rest of the world than it has over the last few years. And I think portfolio preferences would shift as a consequence, and that would have an implication on our forecast--perhaps, as I say, accelerating the downward movement of the dollar.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Don, I think we all feel that probably the most important thing this Committee has going for it is our credibility, the credibility of the Chairman. I was wondering about the effects on our credibility if we took the last option that you presented--if we went up 25 basis points and returned to symmetry--but soon felt that we had to raise rates further. If the inflation numbers in the coming months start to deteriorate and we feel that we have to increase rates, we would be doing so from a symmetrical directive not an asymmetrical one. Are you concerned at all that a symmetrical directive would affect our credibility in the marketplace when right now they're assuming that we will have more than one increase this year?

MR. KOHN. President Moskow, I don't think I am concerned if your concerns and your outlook are accurately expressed in the announcement and the Chairman's testimony. That is, you could move to symmetry but still express the view that the major development you're most concerned about that would threaten the good performance of the U.S. economy would be a pickup in inflation. You would indicate that you will be especially alert for that, but you don't have enough confidence that such a pickup is coming along to be able to say there's a high probability of moving at the next meeting or the meeting thereafter, which retaining asymmetry might imply. So I don't see a credibility problem with going to symmetry, provided the accompanying explanations express your concerns. There's nothing about symmetry that means you can't move if the information that comes in suggests that you need to move. The Committee has frequently taken policy actions from symmetrical directives. If the markets are surprised, so be it. The most important thing you do, obviously, is to make monetary policy. That you can prepare the markets and be accurate forecasters and tell them where the risks are coming from is a nice bonus. If you're right, that will help markets react in a stabilizing way consistent with your concerns. It's quite possible that you will expect one thing and something else will happen, but you could still react. I don't see symmetry and then action from symmetry as doing anything to the Federal Reserve's credibility, assuming the Committee gave an honest and full explanation of its assessment of the risks. And perhaps the nuances involved in that assessment could be conveyed better in that way than through the symmetry/asymmetry on/off switch.

MR. MOSKOW. You obviously don't feel that the very strong reaction to the tilt announcement at the last meeting changes the historical view of how people look at our making a move from symmetry.

MR. KOHN. My concern actually would be the other way. After you announced your tilted directive, a lot of observers noted that it had had very little meaning in the past--that only a small proportion of such directives had actually led to a tightening. But somehow that tilt put the spotlight on the Federal Reserve. And the interaction of that asymmetry and the statements coming from the Federal Reserve built in a much stronger presumption of tightening than I think most of the Committee members had in mind when you made that move in May. So in some sense your concern might be that announcing an asymmetrical directive would provoke a market reaction that would not be consistent with how you plan to approach your next couple of meetings. I think an announcement of asymmetry has a problem also in terms of potentially misleading the markets about how you view your policy stance.

MR. JORDAN. May I ask a follow-up question on that?

CHAIRMAN GREENSPAN. Go ahead.

MR. JORDAN. Maybe this question is for Peter Fisher since it has to do with the markets; I don't know. Wouldn't a switch to symmetry suggest that the risks are in fact balanced?

MR. KOHN. My view is that you can give a sense that the risks are not balanced, but they're just not so unbalanced that you see a high probability of action at the next meeting. Yes, we're slicing the baloney very thin here! [Laughter] I think the Committee is in a very difficult position. The attention on its statements has become very intense; each word is examined. It's very, very hard to convey accurately the subtleties of a position where future actions are highly data-dependent. Yes, you think the next action is more likely to be a tightening than an easing, but you're not sure when. That's the information the markets are looking for and that's the sort of thing that used to be conveyed in the minutes and the Humphrey-Hawkins testimony. That is now conveyed in the announcements and the publication of the symmetries, but you have less opportunity to explain the nuances--to say on the one hand or on the other hand. So the Committee is in a difficult position. It is a position, I guess, in which you might argue that neither symmetry nor asymmetry, as the markets potentially see it, accurately represents your perspective. Given the potential reactions to the announcements, the question is how to walk through that minefield, how to least mislead market participants.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Don, even though in the 1994-1995 period we didn't announce a tilt until after the following meeting, do I remember correctly that we did seven consecutive firming moves and that each and every one of them was from a symmetric directive?

MR. KOHN. I know that we went to symmetry after each move. I'm not sure of the subsequent moves because they weren't at every meeting. Sometimes we skipped a meeting. I don't know. Norm Bernard, do you know whether the subsequent moves were from a symmetric directive? I know that every tightening was accompanied by a shift to symmetry but I'm not sure whether there was a shift to asymmetry in the interim.

VICE CHAIRMAN MCDONOUGH. And the world didn't think that we had stopped being a responsible central bank just because we went to a symmetric directive? That's a question!

MR. KOHN. I guess not! [Laughter]

SPEAKER(?). That's a good answer.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Don, do you believe that the markets in the future will view a change in symmetry as a change in policy?

MR. KOHN. I'd say they would view a change from a symmetrical to an asymmetrical directive as being a strong forecast of the next move. I guess one concern would be that they might come to interpret it as a stronger forecast than the Committee intended. Now, this may come out of the Committee's attempt to retain as a policy choice the option of asymmetry that wouldn't necessarily be published. In the process of explaining the Committee's policy on announcing tilts in the directive, we said the Committee would only publish strong asymmetries. The markets perhaps reacted to that, which may have made it worse. Peter Fisher's chart yesterday I thought was revealing. Bond rates actually went down in the week after the asymmetry was published. So the publication of the asymmetry per se didn't build in this tightening. I don't have a fed funds futures table in front of me, but my memory is that those futures moved a couple of basis points--3, 4, or 5 basis points on the publication--but didn't do much thereafter, or may even have come off a little. I think the publication of the asymmetry interacted with subsequent events to build this tightening in; it put more attention on the statements of the Chairman and other Committee members and then that built in the tightening.

Now, what we don't know is what the markets will read from this last intermeeting period if, in fact, the Committee tightens today. We don't know whether they'll say: "See, we were right; you published asymmetry and then you tightened." If there were a couple of instances where you went to asymmetric directives, published those asymmetric directives and didn't tighten, I think the market over time would learn that asymmetry isn't necessarily a serious indication of an imminent policy move. But you would have to be willing to live with markets building in something, then taking it out, which isn't awful if you want to retain the asymmetry as a softer indication of the balance of risks. But I think it would involve a learning process for the markets.

CHAIRMAN GREENSPAN. Any further questions for Don?

MR. BROADDUS. I have just one quick question and perhaps I should direct it to Peter Fisher. Peter, is there any active discussion--and if so, to what degree--that market participants are looking at the symmetry/asymmetry decision as opposed to the move itself at this meeting? How much explicit discussion is there of that?

MR. FISHER. I think a great deal of the markets' attention over the last couple of weeks has not been on how many basis points the Fed will move at this meeting but on what the wording of the announcement will be and whether there will be symmetry. Our traders have responded to foreign central banks wanting to know the rules this Committee follows in deciding whether to say something about symmetry or not. The whole world is really interested in the second part of the announcement

MR. BROADDUS. That's what I thought. I just wanted to make sure.

CHAIRMAN GREENSPAN. They are interested in the process.

MR. KOHN. I think the more general point, President Broaddus, is that what the world is really interested in is the Committee's views of where it is going from here. They have the 25 basis points built in. Now they want whatever clues they can get about where you are going; the symmetry/asymmetry is a clue but it may not be the only one.

MR. BROADDUS. I'm trying to figure out how to do that.

CHAIRMAN GREENSPAN. Any further questions for Don? If not, let me get started by saying that I think we have to move at this meeting, but before I comment on that I would like to bring a much broader issue into the discussion. The reason is that, at least from my point of view, that issue comes to grips with a number of the crucial questions that we have to answer in order to get an effective policy. We would like to go where the economy and the financial system suggest we ought to go, whereas everybody else is looking merely at where they think we are going irrespective of why.

At the last meeting, I thought I saw signs that the surge of cost-cutting and hence productivity acceleration were beginning to crest. I was mistaken. After a short hiatus of continuous upward revisions of company five-year earnings expectations, the upward revisions resumed late last year and, if anything, have accelerated. The forecasts this month of five-year cyclically adjusted growth of expected earnings per share for the S&P 500 are a full ½ percentage point higher than late last fall. I can't say that I believe the rate of long-term annual earnings has truly shifted up ½ percentage point in so short a time frame, only that companies are telling security analysts that that is the case. Some of this revision surely reflects a pickup in projections of foreign affiliate earnings in Europe, Japan, and developing Asia where those data have been showing some strength in the most recent quarters, but most of the pickup of necessity reflects domestic earnings.

There is little evidence that the explanation is a change in long-term price forecasts. Indeed, the forecasts have been holding for quite a long period of time to the notion that there is no "pricing power." Nor is it an upward revision in long-term population growth; that I am almost certain is true. Further, it probably does not reflect a major increase in the share of profits relative to wages.

What we are observing in the earnings forecast series, as best I can judge from a disaggregation of these numbers that was carried out in considerable detail, is the statistical reflection of the anecdotal evidence of dramatic breakthroughs in information technology and most recently the surge of Internet applications. The presentation last week to the board of the Federal Reserve Bank of Chicago was one of many that I have heard in the last several months on this issue. What I found particularly interesting in the discussion that Mike Moskow organized was the concern going forward of

regarding indications that Internet commerce suddenly appeared to be accelerating. Very substantial actions were going to be required on the part of counter the competition coming from this very different, low-cost distribution system.

is in the process of making a major shift from its conventional "brick and mortar" stores toward the Internet and related technologies, with very profound effects on its employment. And while we are acutely aware of the very dramatic changes in productivity that have occurred in the manufacturing area as a consequence of just-in-time inventory management and capital flexibility, it is less clear how much of that has been happening in the distribution sector. But it now seems, on the basis of a number of very recent reports, that we are seeing an acceleration of activity in this area that suggests the early development of some form of critical mass that will enhance productivity in the distribution sector over time.

I am not sure whether the 4 percent annual rate of increase in productivity estimated by the New York Bank for the second quarter is right, but we do have fairly good evidence that manufacturing productivity in the second quarter has accelerated quite significantly from the most recent trends. Indeed, if we take what we reasonably know about manufacturing productivity, the number in the Greenbook for the second quarter for nonfarm productivity growth implies that either nonfinancial, nonmanufacturing corporate productivity growth is down sharply or, as I suspect, noncorporate productivity is negative--or some combination of both. In short, the possibility that our Greenbook's second-quarter nonfarm productivity estimate is on the low side, given the harder numbers for manufacturing, is not to be dismissed. So while your 4 percent number, President McDonough, was probably grabbed out of the air, more or less, it may well turn out to be correct.

Algebraically, the percentage increase in long-term expected earnings in the context of a stable long-term profit-to-wage relationship is equal to the sum of the expected inflation, the expected percentage rise in aggregate hours or population, depending on the way one may want to look at it, plus the expected percentage increase in productivity. It is not likely that the upward revisions in forecast earnings since late last year reflect revisions in expected inflation or population growth. And assuming the earnings of foreign affiliates are not distorting this picture too much, the implicit revisions in earnings forecasts that are being reported by business firms seemingly reflect the equivalent of a ½ percentage point rise over the past several months in the expected trend productivity growth rate. Now, I'm not saying that they are right. I'm merely indicating what the broad sum of anecdotal information filtering into a large number of security analysts who are evaluating S&P 500 companies is in effect saying. This raises, in my judgment, some really important questions.

Our Greenbook forecasters have chosen to use the same trend growth rate for all quarters of their forecasts. They have always done that. It's automatic. They don't make a distinction from one quarter to the next even though I would suspect that when we look back on this period, we are going to get a nonlinear, or more exactly an accelerating, longer-term growth path as the only way to fit the data. With the econometric structure we employ, an unchanging productivity trend algebraically requires inflation to accelerate if we have an estimated NAIRU that is above the unemployment rate, which we do. If trend productivity is accelerating, however, the forecast inflation rate can stabilize or even fall. So the implicit forecast of rising inflation that we have had in all of our discussions this morning logically requires that the productivity growth rate be stable or at least accelerate only very modestly. Does the funds rate need to be increased by 50 or 75 basis points as is indicated in the Greenbook forecast? The answer is "yes" if our models capture reality.

Obviously, once output per hour stabilizes even at a high rate, the acceleration of inflation resumes provided, of course, that the NAIRU remains above the unemployment rate. We have no evidence at this stage of which I am aware, however, that indicates the acceleration in productivity has ended. All of our experience and courses in Econometrics 101 induce a visceral antipathy to such persistence in productivity gains, especially for me since I have the oldest gut in this room. [Laughter] What is increasingly evident is that something seems to be happening that none of us has ever witnessed before--perhaps a once-in-a-century structural shift in how goods and services are produced. People in the front lines of business operations, such as Jack Welch of GE and Lou Gerstner of IBM, say this is a true revolution. They have seen nothing like this in their experience. And I venture to say that if we get on the phone with a number of business people who have been around a long time, we are going to hear this view from all of them. No one is saying that this accumulative, technology-driven productivity growth is showing any signs of slowing.

I would not go that far, but I believe something profound is happening. We are observing market capitalizations that are telling us something very interesting even as we simultaneously argue that stock market prices are overvalued. We are seeing a very dramatic shift in the changing capitalizations of high-tech versus low-tech companies.

But even the low-tech companies are not showing any significant real destruction of market values, though that's only because there are no low-tech companies anymore. The least efficient types of steel operations, such as those employing blast and oxygen furnaces and old-fashioned rolling mills, if that's all they were, would long since have disappeared from the industrial scene. But they have stripped workers out of rolling mills at a rate that is unbelievable, and we are left with high-tech steel operations--to the extent that we can have them with that obsolete structure of making steel.

I had a conversation with on the question of what will happen to the market values of real estate in malls if indeed we experience a significant shift to cyber space types of distribution. In that event, the commercial buildings will no longer have the importance that they now have. The one saving grace in all of this, as I believe I said is that shopping is not a fully economic activity. In fact, most people actually seem to shop for entertainment and other reasons.

So, shopping malls are places involving what might in a sense be viewed as cultural activities. Shopping is what people do. We are not dealing with a wholly economic issue. I am not saying that it is appropriate for with their huge real estate investments, to be significantly worried. But there is something going on in the economy, something profoundly important, and we don't know where it is going to lead. The mere fact that some profound economic change occurs every century must put us on guard to make sure that it doesn't happen on our watch without our being aware of it. If it's real, it is crucially important and very significantly complicates our task in setting monetary policy.

How do we know when an economy is overheating? We cannot tell from the rate of economic growth by itself. Obviously, if output per hour is accelerating, so are real income and GDP. And if output is accelerating, that of necessity has to show up in the spending components since the accounts must balance. Currently, motor vehicle sales are running well in excess of past trends. Housing sales are absurdly high. Capital investment is strong. So, are we really saying that the economy is overheating because we are looking at a 17-plus million annual rate of automobile sales and new home sales that are moving up to a 1 million annual rate? That, in and of itself, says nothing about the degree to which this economic system is overheating. We cannot tell until we look at the combination of aggregate supply and aggregate demand. The reduced form view of all of this is whether or not we have slack in the product and/or the labor markets.

If we have a situation in which effective demand exceeds potential supply, then prices rise. If it is the other way around, they fall. What we have now is clearly an ambivalent set of circumstances in that we are getting a very dramatic acceleration in aggregate demand but we are not seeing the usual effect in prices. Or more exactly, from the point of view that I think is relevant, we are not seeing it in unit costs. Indeed, the data that we put together, or more exactly that Larry Slifman puts together by extending the information that we get from the BLS and Commerce on unit costs in nonfinancial corporations, suggest that for the quarter just ending--and this is consistent with the Greenbook which, remember, I suspect has a low productivity estimate--the change in unit costs is effectively zero over the past four quarters. Prices are up somewhat because margins seem to be rising in certain areas. Overall, margins have risen a good deal from the fourth quarter of 1998. The reason is not that prices have been accelerating. It is that unit cost growth rates have been falling. In that regard, when we look at a system where short-term earnings expectations are accelerating quite pronouncedly--certainly that is the case for the first quarter and also for the second--that is telling us that profit margins are opening up in the context of a decline in unit cost growth. This is scarcely an indication that effective demand is exceeding potential supply at this particular stage. We certainly don't see it in terms of product market tightness. We don't see any particular shortages.

Where we do have a problem is in the labor markets. If we had a fully balanced system in which output and demand were equal to working age population growth plus trend productivity growth, then one would presume that we had a stable system. We don't have that at the moment. We are continuously reducing the number of people who would like to work but don't have a job. That number is going down, though it is going down less than it was a year ago when the pool of available workers was shrinking at an annual rate of a million people. That number is now down to about 500,000, which is roughly equivalent to ½ percentage point in potential GDP growth. In other words, aggregate demand is currently running in excess of potential growth by about that amount. And that, as best I can judge, is being engendered wholly by a wealth effect. In fact, our estimate of the wealth effect is greater than that.

The point I am trying to make here is that we have a situation that is out of equilibrium. We don't see it in the price data currently. What we do see is a situation that, if it continues indefinitely, must create some problems in the labor market and eventually in unit labor costs and prices. At that point we clearly will be experiencing a real-time inflation process.

The one thing I find a little puzzling at this stage is why the rates of decline in both the unemployed and the broader category of job seekers are slowing. One argument obviously could be that we are running out of people and are scraping the bottom of the barrel. But if that were the case, we would see far more in the way of anecdotal reports, not to mention statistical data, on increasing average hourly earnings. It may be that when the data for June come out on Friday we will see a big pop, and we will then be able to say "problem solved." But that is by no means evident. To be sure, the last Beigebook did show a little more evidence of labor market pressures. But we do not have clear-cut, unequivocal evidence at this stage that the economy is in the process of accelerating. If we believe the economy we have today is truly captured by the forecasting structure in the Greenbook and in the extended projection of the Bluebook, then the policy issue that Tom Hoenig raised would be up front on the table and in my judgment definitive.

My answer to Tom is that if we believe the staff forecast, the argument for 50 basis points and going symmetric would I think be overwhelming at this point. My problem is that as I see it the structure that is actually governing this economy is not being properly captured in the models used for the forecasts. I believe the evidence that we have to date suggests that the 2¼ percent trend productivity number is already obsolete. I suspect we are going to find that to be the case as the year goes on unless the individuals in the business community with whom we interact are completely missing the boat. We would not be seeing the profit figures and the economic growth that we are observing if what all these people are saying is wrong. And we surely would not be seeing declining rates of inflation in unit costs. Indeed, after this extended period of economic expansion we would not be seeing a four-quarter average change of zero, or actually -0.1, in the unit costs of nonfinancial corporations and of 0.2 in unit labor costs. This is not the type of economy that is well captured by the econometric structure we have built into our Greenbook forecasts. One only needs to go back and look at the Greenbook forecasts to see that the projected trend productivity number is higher in each successive Greenbook.

I don't know whether the surge of cost-cutting and the acceleration of productivity have reached a peak. As I said at the beginning, I thought at the time of the last meeting that there was some evidence that that was indeed the case. The stabilization that I felt was happening has disappeared and productivity has surged dramatically higher.

I do feel uncomfortable with the funds rate at 4¾ percent, and I think the appropriate thing is to move it up to 5 percent if for no other reason than to undo part of the 75 basis point reduction that we put in place during the fall. That clearly was a reaction to events which, as Don Kohn just said, have changed. There is the longer-term issue of our labor markets still being out of equilibrium even if we can explain why wage pressures are not as strong as I, at least, think they really are. I know our wage-price equations do capture this in part, but I am frankly a bit skeptical and fearful that a little data mining is involved in this process.

If we are looking at the issue of symmetry versus asymmetry, I don't think the realistic question relates to the most likely direction of the next move we are going to make. Unless the economy comes apart unexpectedly, I think the chances of our having to move the funds rate lower are close to zero. The next move we are likely to make is almost surely up. If that is indeed our expectation, we would have concluded under our past regime that that calls for asymmetry. But we are now in a new regime and those terms no longer mean what they did in the past. I was startled by the extraordinary market talk after we announced an asymmetrical directive following the May meeting, though the correction in the federal funds rate that actually occurred was modest. We might as well have raised rates at that point as far as I am concerned. What I find quite bothersome is the existence of at least some evidence, although Don Kohn tells me it's somewhat dubious, that a lot of corporate treasurers are allegedly borrowing ahead for the purpose of beating the Fed to the punch. Indeed, what we are looking at is a long-term interest rate that is moving up because market participants think the Fed is going to move. In the process we are losing our ability to understand what the markets are telling us. I am concerned that we are looking in the mirror. What we are endeavoring to do is to evaluate objectively what is going on in the economy and to craft monetary policy to appropriately address what we observe. But with our new announcement procedure, I am fearful that we may inadvertently have created a situation in which financial players are reacting to what we are doing and in the process causing the markets to run ahead and give us signals that are inappropriate.

I believe it was Ned Gramlich who pointed out that the federal funds rate is lower at the moment than the real implicit long-term rate. I suspect there is a good policy argument there, but I'm not sure that the real long-term rate is the market rate. I think it may be the Fed viewers' rate of the day, and I am not sure that helps us because we can then get ourselves caught in a bind. I know that sounds a little peculiar, but I think the way Don Kohn put it is probably what we ought to be doing, namely to go to formal symmetry. We also would, as we have in the past, suggest that our real concern is the risk of rising inflation. We do have potential imbalances in that direction and very little evidence on the other hand that our next move is going to be to lower rates.

So I would suggest, for discussion at least, that we raise the funds rate 25 basis points today, go back to formal symmetry, but include wording in our announcement that we have used in the past when we were going asymmetric. That's a longer speech than I had intended to make.

MR. KELLEY. Very interesting.

CHAIRMAN GREENSPAN. Vice Chairman.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I agree fully with your recommendation and let me explain why. In my view there is no question that we should raise the fed funds rate. A failure to do so would create an extraordinarily strong reaction in markets; I think the first trade would be up and I'm not quite sure where the second trade would be because people would wonder where Federal Reserve policy was now headed.

The issue really becomes the question of the announcement and the tilt. I agree with you fully--and as I mentioned yesterday--that financial markets are simply not functioning in a way that a market economy needs to have them function. Markets have to have bulls and bears and buyers and sellers to function effectively. Instead, what we have is people trading off a new breed of Fed watchers who are more involved in politics and amateur psychoanalysis than the old Fed watchers who tended to look at all the numbers and variables. This phenomenon, I think, is extremely counterproductive and something that we need to move against by shifting our approach.

I tried to make the distinction yesterday between the philosophical role of the central bank, which is clearly price stability on a symmetric basis, and the need in a shorter time frame to distinguish between strategy and tactics. I believe the intermeeting tilt should be described as tactical. Since it is not clear when we will have to make the next tightening move, it seems to me that tactical symmetry is appropriate and that is what I believe you recommended.

The question is: How do we go about establishing what I would describe as strategic asymmetry, if the likely imbalances in the market develop in the direction of requiring further tightening? I think we have to do that through the new vehicle of the statement regarding the policy objectives of the Federal Reserve that will accompany our action this afternoon.

I also agree that if we were absolutely certain that we had to increase the funds rate by 50 basis points, we ought to do it today and go symmetric. However, I think that would be very, very difficult to manage. We have had a poor record in this Committee in trying to give a signal that we have done something and that's it; and certainly the recent experience of the European Central Bank would not lead one to believe in such an approach. The last time I remember our doing that was in August of 1994 and it was a mistake then. I think a lot of us were rather queasy about what we said then. We should have been because it was the wrong thing to say given that we did continue to tighten after that, and rather soon after that.

In addition to the fact that it would be very difficult to manage, there are two other reasons why it isn't altogether clear that we need to raise the funds rate another 25 basis points this year. I have a feeling, in one of the older stomach linings in this room, that the new once-in-a-century type of phenomenon is actually likely to be happening. But as central bankers, with monetary policy lags of one to two years, we don't need to sign up for that view now. All we need to do is have a reasonable degree of confidence that it is likely to continue for the next one to two years. And I think there is every reason to believe that.

Lastly, on the issue of labor force tightness: Without any question all of the anecdotes that we hear that markets are very tight here and there--in fact, in most places--are clearly right. But just as the economy is changing, I think the labor force and the availability of people in it are changing too. We have within our society fairly large numbers of people who really thought jobs were not available for them. We are changing that. The nature of the way the economy is behaving, the beneficial effects of what has been-- either by good luck or good guidance or some of each--very effective monetary policy is making it much more likely for many people to think that they can really have a job. The data on the labor force--data measuring those who might like to be in the labor force-- don't pick up such people very well. If we can continue to find that difficult-to-define pool and bring these fellow citizens into the labor force, I think that is a very good thing. We can't base monetary policy on the hope that that will happen; it may happen, it may not. But it's another reason to be observant of that change in the labor force and in the availability of people to join the labor force--changes that flow from the changes in the real economy. That's something else we have to be aware of. Thank you.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. Thank you, Mr. Chairman. First of all, let me thank you for those extremely provocative remarks. I look forward to working on digesting them as soon as the transcript is available to us. But on a much more prosaic level, let me say initially that I strongly support your recommendation. I think there are two sets of reasons to be cautious about moving too aggressively right now. The first revolves around the uncertainties of today's economic situation, and in that regard I would make a couple of points. This economy could slow spontaneously. In fact, it is doing so in the second quarter relative to the first quarter. If we look at consumption and include housing as a consumption item, that represents over 70 percent of GDP. If we throw in capital expenditures, it's well over 80 percent. I can think of a number of reasons why a great many of those components could very easily grow more slowly. Even if they remain at a high level, their rates of growth could be substantially lower. Just because they haven't done that so far doesn't necessarily mean that they can't or won't.

Secondly, and this is partly what you referred to, Mr. Chairman, the trends of the recent past could very easily extend for a long time. Extremely strong productivity may very well have a long life ahead of it. Inflation may stay quiescent as it has been. If the economies of the rest of the world stay somewhat more sluggish than we are implicitly thinking, that may happen; and it would have a strong impact.

Lastly, we have a stock market that is in a very precarious position. It's very fragile and I think very shock prone. Investors can take their chances, but the concern is that stock market developments could have a strong impact on the real economy.

Another factor in play here--and this harkens back again to your remarks, Mr. Chairman, and to the dialogue with Don Kohn a few minutes ago--is the dynamic that we may have set in place with our new policy of releasing the Committee's views much more freely. I think our first venture out with an announcement of our tilt in May really went quite well. The markets seemed to understand it quite accurately and accept it for what it was. Why we did it was interpreted fairly well. Markets moved. And here we are, we're moving. It worked okay this time around; I think the reaction was quite responsible. But I think we ought to be careful about being too comfortable that this is always going to be the case. This new policy we have now is being watched with unbelievable intensity and apprehension, not just by market players but also by the man on the street for perhaps the first time. My sense is that it is broadly perceived by Wall Street and Main Street that under the old regime, as they came to understand it, these tilts meant very little to them but that under the new regime they probably mean a lot more. And they just don't know what that meaning might turn out to be. That is a perfect setup, I think, for a very serious misinterpretation or overreaction on the part of the public. To avoid that, this Committee should be very judicious and very cautious in how we bill this policy and its announcement. I fear that if we do more than just a 25 basis point tightening today, then we are going to run a wholly unnecessary risk of losing control of events here and of very possibly creating substantial and unpredictable mischief. Let's remember, of course, that we can tighten any time we feel it's necessary; and we can do it, and have many times, from a symmetric directive. We can so indicate in the announcement that we release this afternoon. Thank you.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Thank you, Mr. Chairman. The Greenbook forecast, which is not far from either the consensus forecast or my own, suggests that we will not be able to stabilize inflation at an acceptable rate without multiple tightening moves. Given the risk of higher inflation, the 50 basis point tightening this year that is incorporated into the Greenbook forecast would in my view be prudent and appropriate. That would mean doing the 25 basis points today and another 25 basis points later in the year, subject to the condition that data in the interim do not disconfirm the need for a second move. I believe there are few risks of moving in this direction, given the strength of the economy today, initial conditions in terms of labor market tightness, and our ability to reverse course if necessary. There is, on the other hand, considerable risk in doing nothing. This is another example of the maximin strategy: Consider the worst outcomes under various policy alternatives and select the policy with the least bad outcome. Mr. Chairman, you talked about the possibility that productivity is still accelerating, and that might be the case. If it is, I expect it also means that the equilibrium real interest rate is rising as well; and in that case it seems to me that there is little damage to be done by such a modest increase in interest rates.

I want to spend some time talking about policy rules and the issue of how to operate with uncertainty about the measurement of the output gap. The papers that were prepared for this meeting were, I think, very provocative and interesting and deserve some comments.

The policy prescription from the simple Taylor rule would yield a more aggressive near-term tightening than the one I suggested. But a similar trajectory over time is in the Greenbook in the extended forecast. The policy called for under the Taylor rule would fall into two phases. The first phase would be what I'd call the reassessment or the releveling phase. That is, the rule would call for immediately reversing at least the easings of last fall for a return to the prescribed path for the target funds rate. The second phase would be in response to changes in the unemployment rate and the inflation rate going forward.

Now, the Orphanides et al. work on uncertainty about the output gap suggests attenuating, though not eliminating, the response of the funds rate to changes in the output gap. It suggests, therefore, only a partial return to the level-based Taylor rule prescription, but would yield the same "phase two" increase in the funds rate in response to higher inflation. The conclusion in these papers that policymakers should downweight their response to changes in the output gap in the face of uncertainty about its measurement is both very intuitive and very sensible. But there is a difference, as emphasized in these papers, between downweighting the response to the output gap and ignoring the output gap altogether. This is the difference between uncertainty and total ignorance.

I would note also that the Orphanides, et al. prescription is symmetric. For those inclined to applaud the downweighting of the output gap at the current policy decision point, keep in mind that the same logic implies that we should also respond by less to increases in the unemployment rate as the economy weakens. We can't have it both ways--to be aggressive to a weakening in the economy and passive to a strengthening unless, of course, we want to guarantee higher inflation over time.

These papers highlight very effectively the importance of flexibility in using policy rules. Policy rules are best used to inform judgment, not to displace judgment. At times we might be willing to respond to the data; at times we will want to respond to the forecast. Sometimes we may have the confidence to implement level-based rules; sometimes we may want to be more cautious along the lines of change rules. Whether we're prepared to be more aggressive or more cautious in responding to changes in the output gap may also depend upon initial conditions, in particular where we are relative to the range of estimates of the output gap.

The question remains how to apply the insights from this work. I don't find appealing the change or growth rule offered by Orphanides. It suggests that we raise the funds rate when growth is above trend, then lower the funds rate when growth falls back to trend. Given that the underlying model implies that inflation depends on utilization rates and not growth, the change rule does not seem like a sensible strategy to me. It implies raising the funds rate when the utilization rate is rising, then lowering the funds rate when the utilization rate stabilizes at the higher level. The problem is that it's difficult to design a sensible rule in the face of uncertainty if constrained to linear rules.

The rule I suggested at previous meetings is a nonlinear one. It allows for a downweighting of the response to the output gap when the gap is in a range around the best estimate, but for a sharper response once the gap has increased to the point where one is more confident that the economy has moved beyond the level of sustainable capacity. This is consistent with the sensible view that we should be cautious about fine-tuning, interpreted to mean aggressive responses to small changes relative to our targets. But we should recognize the gains of "crude-tuning," interpreted as more aggressive responses to changes in output once output has moved farther away from the target. Applying this nonlinear rule to today's decisions would imply returning toward, but not all the way to, the simple Taylor rule prescription. A 50 basis point increase in the funds rate implemented over the next few meetings would, for example, be consistent with a halving of the response parameter of the output gap in a simple Taylor rule. But my nonlinear rule would also call for returning to a more aggressive response to further increases in the output gap going forward, given that the unemployment rate is already so low relative to estimates of NAIRU. A 25 basis point move today could be viewed as a partial reversal of the ease that was implemented last fall, in effect a partial return to a level-based Taylor rule. This is also consistent with a preemptive effort to limit the upward trend in inflation that appears likely to emerge going forward.

Let me emphasize a consideration favoring the second move, if it's to be made, at the next meeting or two as opposed to later in the year. My presumption is that we will be disinclined to tighten after October through the end of the year because of possible volatility in financial markets related to Y2K and to shifts in the demand for liquidity. While a move in November is certainly not out of the question, I suspect we will be reluctant to take such action.

Now, I think the decision about whether or not to retain an asymmetric directive today is somewhat less important in light of the fact that there will be an announcement, presumably, if we raise the funds rate. We can use this announcement to convey our sense of the balance of risks. Nevertheless, I have a preference for an asymmetric directive.

Let me note, however, that I think we are likely to encounter problems whether we opt for a symmetric or an asymmetric directive. If we return to a symmetric directive, the markets are likely to interpret today's move as the one and only one that we expect to make this year, unless they doubt we really mean a symmetric directive. As a result, market participants will revise downward their expectations about the funds rate in coming months, resulting in a rally in the bond and equity markets. I would prefer a more market neutral result. We could try to achieve this by combining a symmetric directive with asymmetric language in the announcement, but that seems destined to look confused as well as to confuse.

If we choose an asymmetric directive, on the other hand, we could feed the anxiety in the markets about an even larger set of increases than the 50 basis points I expect to be appropriate. In addition, we want to keep our options open for a further rate increase as we assess the data over the next couple of months, rather than definitively signal that it's a sure thing

My preference is for an asymmetric directive with a somewhat calming announcement, followed by a return to a symmetric directive after the second move--if we opt for a second move. This has the advantage of conveying the most useful information to the markets about our intentions and of being truthful. An added benefit is that moving to a symmetric directive after the second move would be a very effective way of signaling that we do not expect further near-term moves. It would be less informative if we moved to a symmetric directive today and then raised rates in August or October.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. I am at least a modified new economy kind of guy. I have argued in the past here that there is reason to believe that we have had a shift up in productivity and a shift down in NAIRU. The staff models have incorporated this and, as I said yesterday, I'd be willing to take their modification as probabilistically accurate. I read the materials carefully over the weekend and I concluded that a 50 basis point increase was appropriate.

When Don Kohn circulated the Orphanides paper, I probably had a perverse reaction to it because it reminded me of the 1960s, and I think I'm haunted by that. We let inflation get out of control then; we got behind in the game. And I certainly don't want to do that again.

I'm sorry that Alice Rivlin can't be here for what I'm about to say next. We often talked about making the FOMC meeting more like a meeting--that is, not having canned remarks so much but actually having an interchange of ideas. I will say in that light that, frankly, you've all talked me out of a 50 basis point change. The discussion yesterday was less hawkish than I would have imagined. A number of you surprised me in what you said. The Chairman had a couple of bites at the apple, and he eroded my faith in the 50 a little bit each time. So I'm now okay with 25.

Frankly, I don't see a huge difference between 25 basis points with symmetry and somewhat hawkish talk versus 25 basis points with asymmetry and some language in our announcement that says this is not the start of a 300 basis point increase or something on that order. It's hard for me to be certain, but my uninformed understanding of markets is that they tend to evolve to reflect what people say over time. There will be an announcement today. There will be future testimony. So I don't have a huge preference on that issue. I suppose I'm a bit on Larry Meyer's side of that because every time I've tried to slice baloney I've cut my thumb! So I'd rather do it in a fairly simply way. But the other could work, so I'm certainly not going to dissent from that.

I want to say a few things about the FOMC, though. My main point is that, whatever we do today, I think we are placing a lot of importance on future data. So we have to be very careful that we are alert to respond if our present uncertainty gets resolved in one way or another, as indeed we responded last fall. I think we have to repeat that vigilance and readiness to respond now.

Along that line let me make two suggestions on things we might do. One is--and this may violate some traditions I'm not aware of--that I actually liked the experience last fall with intermeeting changes and, since we all have telephones, we might want to do more of that. That might cut some of the wind out of the Fed-watching industry, which I think we would all favor.

The second is that lots of times in our meetings people have come up with new indicators that we ought to look at that don't quite suggest what some of the other indicators have suggested. The Chairman does this more than anybody else, but everybody does it to some degree. I wonder if it would be possible to give some thought to having the staff track information on what I'll call "leading indicators of inflation" and circulate it to the Committee. One thing that might be in it is the unit cost number that the Chairman just talked about; another is this modified unemployment rate, which includes discouraged workers in the calculation of the unemployment rate. There are various kinds of price indices that might be leading indicators of what could happen with what are known as the headline price indices. If we had all of those made available to us on a very current basis, first of all we would all be more informed and, secondly, we'd tend to be more on the same page. Therefore, when we get together and think about what is going on, there would be less chance of being surprised with new information at the meeting that we hadn't really thought about. So I would put on the table the suggestion that we might improve our process, if you will, in that way. I'd like to see the staff give some thought to that. Thank you.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Mr. Chairman, I respectfully but strongly would oppose the move back to symmetric directive language. If I read market expectations at all accurately, I think market participants are widely expecting the ¼ point move and they are also expecting a further move of at least ¼ point in the not too distant future. So if we change the directive language to symmetry, in effect we are going to be changing those expectations. Since we are now announcing the tilt under our new procedures, I think it is going to be very difficult to do so in a statement along the lines that Don Kohn suggested. I respect his point of view, but I'm just not at all sure that the language of the statement that we issue is going to offset the fact that we moved to symmetry. So to me it's a credibility issue. When I heard you suggest earlier what your own expectations are, what I heard is in my view best described as asymmetry toward tightness. I think as a matter of credibility we need to report that.

More fundamentally, I think a ¼ point increase combined with a change in the directive language is just not strong enough in the current situation, even given the points that you made in your comments. Actually, I was thinking that the question might come down to whether to do 50 basis points with symmetry or asymmetry. I had decided on the basis of this kind of logic that even if we did 50, it might be misleading to have a change of language to symmetry.

If I may, let me make some comments on the Orphanides paper. I thought we were going to have a more extended go-around about that, but I would just make a couple of comments because I don't think they are unrelated to the short-run issue. First of all, I thought the Orphanides paper was extremely interesting; it was one of the most enjoyable staff papers I've read in a long time, and I think it's very useful in many respects. Apart from the particular policy conclusions it suggests, I think it could make an even broader contribution if it led us to evaluate, on a more systematic basis, our past decisions and actions retrospectively. The military, for example, have been doing this for years. They devote a lot of resources--time, money, and personnel--to trying to learn systematically from their experience, and I think we ought to consider doing the same thing. After all, monetary policy is not unlike a military campaign. It involves strategy, tactics, uncertain information, and a rapidly changing environment. And the stakes are very high. I think a good way to approach this would be to develop some additional real time series and also to start routinely keeping real time data going forward. Some of that is already going on in the System. But if we were to do the kind of thing I have in mind, I think it would have to be centered here at the Board.

With regard to the paper's specifics, Orphanides shows that real time output gap data are subject to significant measurement problems. And he concludes that we should reduce the weight that we give that data, or more fundamentally that we should move the funds rate only very cautiously in reaction to incoming data on the output gap. That would mean, in the context of the paper, that we would react primarily to deviations of actual inflation above an inflation target. But arguably--and this is really the simple point I want to make--our main policy successes in the 1980s and 1990s have come when we have acted more preemptively. The go/stop cycles that all of us remember in the 1960s and 1970s were, in my view at least, often the result of not reacting aggressively enough to early signs of rising inflation pressures. If there are problems with the output gap, then maybe we could find some other variable--some forward-looking measure of inflation expectations--to use in this context, if we use that sort of rule, such as survey information or bond rates. So it may be a good exercise to take on to see if we could develop some of these real time data series to see how a Taylor rule would work with those.

Finally, I'd like to point out a deficiency in the Taylor rule as I see it; I think it is fundamentally the one identified in the Orphanides paper. And that is that the rule suggests that we only need to move the real funds rate away from a fixed constant, given by the historical average, if in fact an output gap or an inflation gap arises. But as Larry Meyer suggested earlier, even if these gaps were zero, macroeconomic developments can make it necessary for real short rates to move and for us to follow and accommodate those rate changes. An example, one Larry cited earlier--and I've made this point in some previous meetings--is that an increase in trend productivity growth means that real short rates need to rise. Just to repeat, the reason is that households and businesses would want to borrow against their perception of higher future income now in order to increase current consumption and investment before it's actually available. So the rate needs to rise to induce those consumers and business to defer that spending until in fact the output is available. The Taylor rule doesn't give any attention to that kind of real business cycle reason for a move in rates. It only allows reaction to inflation gaps and output gaps.

So bottom line, while I really enjoyed reading this paper and I think it was extremely valuable, I'm not entirely comfortable with what I see as one of its major implications, which is that this Committee should be even more circumspect than it is now in moving the funds rate. I believe a case can be made that just the opposite is true. And then we can get rid of this situation where we have 500 reporters and 600 cameras around this building when we have one of these meetings! Thank you.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. I certainly agree that a move today is appropriate. As far as the strength of the action and the way it's interpreted, I'd prefer to do that with or without discount rate increases. Since I believe that a stronger action now is appropriate, I hope the Board will consider the issue of the discount rate on behalf of my directors anyway.

Unlike Al Broaddus, though, I'm going to disagree on the issue of the symmetry. I favor a permanent move to a symmetric directive. [Laughter]

MR. BROADDUS. I might buy that!

MR. JORDAN. The happy state of affairs is one where the collective view of the group, when we meet, is that the risks are in fact balanced. I prefer symmetry in our behavior more than in our words, and it troubles me when there's asymmetry in our behavior with or without asymmetry in our words. Last fall, when the opinion of the Committee shifted toward the view that the risks were on the downside, we moved very promptly over a fairly short period of time to a position where the collective judgment of the Committee was that the risks were in fact balanced. I think we should be symmetric about that on the upside as well. When the collective view of the Committee is that the risks are on the upside, we should move as promptly, at meetings or between meetings, to get back to where we feel that the risks are balanced.

As far as the announcement of symmetry/asymmetry, I think Professor Eisenberg has bitten again, or as the British would say "Goodhart's law has hit us again." We and most other central banks have known that announcing exchange rate targets or levels or something of that nature is a rather foolish thing to do; it comes back to haunt us. We have learned with monetary targeting that if the wisdom of the market is that they know the trigger point--that if some growth rate of some money measure is epsilon above or below a certain level, that is going to trigger a policy action--it isn't going to work. That's because it doesn't elicit the behavior in the marketplace that would occur if they didn't know what the trigger was.

Imagine the absurdity if we were to announce this afternoon that the Committee voted today to raise the funds rate ¼ point at its next meeting on August 24 and, therefore, we plan to save the airfare and the travel time and just not show up then because we've already decided we are going to do that. Well, that's rather absurd. So I think announcing something that is interpreted by the market as meaning that we have already decided to raise rates at our next meeting, as I think the May announcement was interpreted, gets us into an undesirable position. I can tell you already that I don't want to go into the October 5 meeting with a predisposition to raise rates because I don't want to be blamed for the crash of the stock market in October! [Laughter] I also know that I want to get to the December meeting--and possibly even the November meeting, but I'm much more certain about the December meeting--clearly feeling that the risks are balanced. If anything, we ought to feel that we have as much chance of lowering rates as raising them once we get to December and into the next year. We ought to be ready to go in either direction. We know there's going to come a time when things will again be changing rapidly in a downward direction, and I would prefer to enter that environment with the risks in balance. We do not have balanced risks right now. I think we need to get to a position where we're comfortable that the risks are symmetric as soon as we can.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. I think we do need to raise the funds rate 25 basis points today. It seems to me that we are largely boxed in by our rhetoric and we ought to do it and get this episode behind us.

There is a reasonable economic rationale for this, given the uncertainty that we're facing, and that is a "take-back" rationale from last fall, with financial markets and the rest of the world doing better. But I think we want to leave open the question of how much of a take-back we need to do. It may be 25, it may be 50, or it may be 75. Who knows? I think we ought to shift the focus back to the economy and back to the data that come in. If, for example, we become more confident about productivity increases, if we have a continuation of the pattern of prices and wages that has prevailed over the past several years, then 25 may be fine. If, on the other hand, we become less confident of the productivity increases and we begin to see some early warning signs that inflation is picking up, then we are going to have to do more. And we ought to do more in those situations.

As for the tilt, I think we ought to go back to a symmetric directive today. We need to calm things down. We need to shift the public's emphasis away from psychoanalyzing this Committee and back to the economy; in my view a symmetric directive would help do that. Announcing the tilt, at least in this initial experiment, turned out to be a cruder instrument than I think we had anticipated, largely because of the interaction of rhetoric. At this point we just don't know enough to say how much, or if, we have to raise rates further, and therefore we shouldn't box ourselves in for the future. We ought to see how reality plays out and go from there.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, I support your recommendation for a 25 basis point increase. I would favor asymmetry because I think it more correctly reflects what I believe the risks are to the outlook and policy. I would be against symmetry because I fear first of all that, in itself, it doesn't correctly reflect our assessment of the risks. Secondly, I am also concerned that it would be misinterpreted by the market. Obviously a statement accompanying symmetry could clarify things and indicate why the risks are not really symmetrical. But if we are going to go that route, even Jerry Jordan's recommendation becomes more attractive to me. And I really begin to wonder whether referring to symmetry accomplishes anything.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. I, too, support your recommendation for a 25 basis point tightening at this stage. We are in a period of some uncertainty and we should weigh the data a little more heavily than the forecast. I think the data support a small move. The forecast, with a 50 basis point increase built in, is perhaps indicative of the need for a further move, but it's not mandatory today based on what we know. I think there is also some evidence that because of the high wealth-to-income ratio and also a larger share of imports in GDP that we may have a more powerful tool here than we thought. That is something Alice Rivlin raised when she was sitting in that seat a few meetings ago.

As to the question of the tilt, I have a slight preference for maintaining the asymmetric tilt. I'm concerned that if we raise rates and go to symmetry and then put out a somewhat hawkish message saying we're still leaning in that direction, we will create more rather than less of a tendency to psychoanalyze what the 17 or 18 of us are thinking. Frankly, in my ideal world what we would have is a decision, a tilt announcement, and complete silence from the Committee. We are not going to get there, but I think we at least ought to continue the process of trying to help markets understand what these tilts do or do not mean. I'm concerned about creating another tool in the form of a well crafted legal/economic document that will give the market something else to chew over. This is obviously not a strong point of view, and if we go to symmetry with a well-crafted announcement by Don Kohn, I will applaud Don's efforts and try to get him something for his gray hair! But I don't think that's the better way to deal with the situation at this stage.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, I support your recommendation. I came into this meeting wanting at least a discussion of a 50 basis point increase, and I got that, which I appreciate very much. It was very helpful. Along those lines and in listening to you, my assessment has been shaded in terms of the issue--the issue being the degree and the durability of productivity improvements that we're all trying to decipher. So, I would go with the 25 basis points. It is a move up, which I think is appropriate. And it represents a continuation of the gradualist approach on which we have built a pretty high degree of credibility over time, and that has served us well.

Given all that, I would very strongly support a symmetric directive for this meeting. I believe it represents the consensus of the FOMC and I don't think we should be anticipating the next move until one of two things happens--either we get new information that addresses some of the earlier issues you raised, or we as a group have a change in judgment. If either occurs, then we can change the rate again in the intermeeting period or at the next meeting. I think that is the right approach in terms of dealing with the market and the information we share.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Mr. Chairman, I support your recommendation of a ¼ point tightening. My thoughts on symmetry mirror Bob Parry's very closely and the views Larry Meyer and Al Broaddus expressed earlier. I judge the sentiment around the table, certainly my own, as a judgment that one 25 basis point tightening is probably not enough to deal with what is likely to be coming. So I still think the probability of our needing to tighten further is fairly high. To me it is more intellectually honest and more credible to go ahead and tell people that, rather than to try to back into it with a symmetric directive.

I also am afraid that moving back to symmetry mutes our policy move and makes it too timid. My two-year-old granddaughter when she finishes eating says "all done" and has this cute hand signal to say she's finished. I am afraid that not only financial markets but lenders, builders, and others will get the sense that we saw the need to tighten further as only a tiny threat and will quit helping us in trying to lean against what we see coming. Also, to me, moving back to symmetry suggests that we're smart enough to make one small ¼ point tightening move and fine-tune with a precision that I don't think we have.

Finally, I'm concerned, despite the reminders that we frequently have made a policy move from symmetry, about the view that we can tell markets "so be it" if we decide we need to move. Just as we have created a new device with the symmetry/ asymmetry announcement, I think we have created--either intentionally or unintentionally --an expectation that we will try very hard, perhaps harder than in the past, to let people know where we are headed. I am concerned that even though the data may begin to nudge us in the direction of additional tightening, we may want to cycle back through and move to an asymmetric directive and then to a tightening move later. That would push the move to later in the year than is necessary and--as Larry Meyer reminded us and as I said at the last meeting--will get us into the period when I suspect we will prefer not to be meddling in markets while the Y2K situation is in play. So I would have at least a modest preference for an asymmetric directive.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Mr. Chairman, I support the recommendation for a 25 basis point increase in the federal funds rate. I think the issue on symmetry is complicated by the fact that the language in the directive refers explicitly to the intermeeting period. The sentiment around the table seems to be that we may or may not need an increase in the intermeeting period or at the next meeting; I think that's the way the markets are going to interpret symmetry. But the sentiment around the table is that, more likely than not, we are going to need some increases later in the year, perhaps at the next meeting or sometime later. So I think the problem is that we are getting into a box with the precise wording of that symmetry clause. If it's confined strictly to the intermeeting period and if we can make that clear in what we say, then it seems to me that a symmetrical directive is probably appropriate. I don't think we want to give a firm signal that we are rather confident that we will need to increase rates before or at the next meeting. My judgment, in reading what people said around the table, is that we are not confident about that. I would very much defer to your desires in how you want to craft the directive language and the associated wording of the press release.

Getting away from the issue of the wording--which is a very important issue and I'm not trying to belittle it at all--I certainly count myself among those who believe that the Phillips curve is an unreliable policy guide. What that means is that the predictive content for the inflation rate--and I'll emphasize the "predictive"--of the estimated employment gap or GDP gap, however you want to put it, seems to be very low. But having said that, it is still true that we must somehow regulate the thrust of monetary policy to keep it in line with the economy's capacity to produce goods. We can't get away from that underlying responsibility of trying to match the monetary thrust with the economy's capacity to produce.

If it is true that output growth and employment provide little insight into the inflation rate in the short run, this Phillips curve idea, then I also want to emphasize that the converse is also true--that the inflation rate does not have predictive content for employment and growth. We believe the proposition that as a long-run matter the inflation rate can settle wherever it might be more or less independently of the unemployment rate. But we can't have it both ways. We can't believe, it seems to me, that the Phillips curve works only in one direction or that it doesn't work in one direction. If there's no content in one direction, there's no content in the other direction either. That leads me to emphasize that we should not believe that a monetary policy thrust designed to yield, let's say, a lower rate of inflation is going to have any predictable implication for employment and growth.

I have no doubt that a highly restrictive policy could tank the economy. I think we all believe that we can take the economy by surprise and we could produce a significant downturn by making a mistake. But I continue to believe that that's not the likely course of events. I think the greater risk to employment is that inflation will drift up and will drift up to the point where it will unsettle market expectations, and that will put us in the box of saying we just can't allow this to continue. We will get ourselves off on one side and market expectations will be destabilized. So I believe that the greater risk to employment stems precisely from a drifting up of inflation. That is my reading on that.

I'd like to make a suggestion about the directive language. It seems to me that in the general paragraph of the directive--I'm referring to the version called the draft directive which has a brown cover--we ought not to be implying in any way that we are opposed to high employment and high growth. So I would suggest that we move the language on inflation, which is in lines 13 to 17, up to the front so that when we talk about the state of the economy we put the inflation discussion first. I'm looking at this draft that was sent around to us with line numbers on it.

CHAIRMAN GREENSPAN. Which line numbers?

MR. POOLE. The document begins with "the general paragraph," which says: "The information reviewed at this meeting suggests a continued vigorous expansion in economic activity." In other words, we start off by talking about economic activity. What I'm suggesting is that we start off by talking about the inflation environment. The wording can't be moved exactly the way it is written there, but the language about inflation is down in lines 13 to 17. I'd emphasize that our concern is with inflation rather than have the very first thing in this directive be a commentary on the growth of the economy. I understand very well that there may be a problem changing the wording of something like this on very short notice. But I would like to throw out for consideration anyway trying to change the thrust of this so it doesn't look as though somehow we are opposed to vigorous growth by starting right off the bat with that as an observation about the economy.

CHAIRMAN GREENSPAN. Let me make a suggestion. Clearly, we can't do it now because it will create a problem.

MS. MINEHAN. Right.

CHAIRMAN GREENSPAN. Why don't you write a memorandum and give it to Don Kohn. He will circulate it to the rest of the Committee and will collect comments. If there is sufficient support for your position, we could bring it to the next meeting for determination. Is that satisfactory?

MR. POOLE. Absolutely. In the press release for this meeting, if there is a press release, we could put the emphasis on inflation and productivity growth and the uncertainties about them ahead of the discussion of the real economy. Anyway, I throw that out just as a possibility.

Let me say that I continue to believe that greater clarity in our inflation objective would be constructive. I talked about this a couple of meetings ago. I'm not going to say that there's a convincing case that a CPI of 1½ percent for the year is going to yield a better economic performance than a CPI of 2½ percent. But I do believe that uncertainty about that matter is worth in the end 100 basis points in long bonds, whether we settle at 1½ or 2½ percent. I think most people would say that uncertainty that adds 100 basis points to market interest rates is going to affect the way the economy works. So I continue to believe that more clarity about what our real objective is in that area would be useful.

In terms of the market discussion about our policy and the language used last time, the disclosure of the asymmetry--the way I would like to put it in Wall Street language--means that "the fed funds rate is now in play." There was a period in which it was pretty stable and now it is in play. The whole issue is up in the air and that's going to be true until things seem to settle down and the rate settles down.

The ideal situation would be that both we and the market draw the same conclusions from the incoming data about what actions are necessary to be consistent with low inflation. That is the sort of expectational equilibrium that we would most like. I believe the right way to handle this process is to be sure that the market is very clear about our objectives and about our willingness to act to achieve those objectives. As the data arrive on both the real economy and the inflation rate and on productivity and everything else we look at, we would hope that the market would come to the same judgments as we would about how to interpret that data. The hope is that we're not just looking at ourselves in the mirror when we try to assess market reactions to the data. We should try to give to the markets a sense that we're all in this together in terms of trying to make sense out of the incoming flow of data and that we don't have an absolute conviction by any means about where all of this is going to take us. That is, we don't have a conviction about how much the federal funds rate is going to have to move or even in which direction necessarily. Given that we're not very far off of the right place to be, we think the rate is going to depend on how the data come in.

I have a mild preference for an asymmetric directive, I suppose, because I think it accurately describes the tenor of the Committee's feelings about this. But I think also that we need to have some discussion that emphasizes to the market that asymmetry should not be interpreted as a forecast of an automatic 25 basis point increase at the next meeting independently of what happens.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. I, too, favor a ¼ point increase in the fed funds rate. I think it's appropriate economically and the markets are prepared for it. As far as the question of symmetry is concerned, I am on this issue where I usually am, which is that I have a deep-seated, built-in bias toward symmetry. So, I feel that way this time. My preference is simply to assess the incoming information and act if action is appropriate. If we want to accompany that with some semi-hawkish language about how we view the prospects, that's fine with me. But I must admit I'm not at all sure how the market will take that or any other statement.

It seems to me that it's shorthand to say that the market is simply trying to psychoanalyze the Fed and guess what's going to happen next. Another way of saying that, along the lines Bill Poole talked about, is that they're looking at the same information we're looking at and they're trying to piece it together and understand what it means for prospective economic performance, monetary policy actions, and so on. Maybe the effort to do that has become more intense. But even if that's true, this won't be the first time there has been a lot of intensity in that effort.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. We don't know and can't know what is over the horizon. Inflation may be on the verge of accelerating or it may not be. Certainly a strong case can be made that it is. But a similarly strong case could have been made this time last year and this time the year before. Had we tried to enforce the speed limit based on contemporaneous estimates of NAIRU over these last few years, we would most likely not today have inflation under 2 percent and unemployment near 4 percent. I'd hate to see us lose our nerve at this point and risk bringing the experiment to a premature end. I'd rather continue to test the growth limits of the new economy unmodified. But if we have to have a modest tightening, I hope it can be accompanied by a return to a neutral bias to take some of the nervousness out of financial markets. That was the statement I wrote just before you talked earlier, Mr. Chairman. Here's what I wrote afterwards. [Laughter] This is just a shorter version of the same thing: For reasons that you described so eloquently a while ago, I would prefer to keep our foot off the brake and continue to test the limits of the new economy that you described. Your comments led me to believe that if the Committee were not boxed in, you would have recommended at this meeting no change in the fed funds rate. Therefore, to get out of the box, we should adopt an unbiased directive at this meeting and, as Ed Boehne put it, calm things down. Longer term we may want to revisit my earlier suggestion that we stop voting on a directive bias or Jerry Jordan's alternative that we make a permanent move to a symmetric directive.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. I have just a few comments on the longer term. First, I too was very impressed by the discussion we had at our board meeting of the Chicago and Detroit directors when they gave their presentations about electronic commerce. We did it a little differently. We divided the board ahead of time into groups on banking, services, retail, and manufacturing--we had done a background paper for them ahead of time as well--and then they organized the presentations themselves. Many of them did a lot of work preparing for them and I think the presentations really were very enlightening. I came away from that discussion, and from other things that I have read and heard in talking to people about this, with the feeling that something profound is clearly happening in electronic commerce and its impact on firms. I just don't know how significant it is in terms of its impact on the economy. It's an area where we are all learning and we're going to continue to learn in the coming months and years. And I look forward to studying in more detail your very helpful comments at this meeting.

As for the decision today, I certainly agree with the 25 basis point increase. On the tilt, I think it's a very close call. I thought the earlier discussion with Don Kohn and your comments, Mr. Chairman, were very helpful. I think we are somewhere between the full tilt and symmetry at this point. On balance, I come back to the point I mentioned before: that our credibility--or more specifically, your credibility--is extremely important and at this point it's extremely high, too. So, I would defer to you on this question. But my preference would be for asymmetry. Under the current circumstances I think 25 basis points and no tilt will be misinterpreted unless accompanied by a very strong statement and strong language in your testimony. Even then, it still may be misinterpreted as "that's it," as I believe Jack Guynn said. So, I prefer the asymmetric directive but I will defer to you on this.

On the question of the tilt itself, I think we clearly have some learning to do before we know how to use this new tool effectively. To quote you, Mr. Chairman, this is one area where we're engaged in "on-the-job training." It's a new tool and we're in a new environment. We have tightened before from symmetrical directives, but this is new. I recall your mentioning at a meeting several years ago that back in 1994 when you were planning to start a series of tightening moves, you had a great deal of difficulty signaling that intention to the market at that time. Clearly, there's no difficulty today in that type of signaling. We've said that we are going to be more transparent with this tool. If we go with symmetry, I view that as being less transparent. That's my own personal view. In my mind there are questions about the usefulness of the tilt itself. Just listening to the discussion around the table today, it's clear that there are very wide differences among the members of this Committee as to exactly what the tilt means. If we keep the tool in place, I think we will be using it a lot less than we did before, as was predicted last year when we discussed this.

CHAIRMAN GREENSPAN. I think the conversation around the room is making us more Jordanian than we had been. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. I have thought for some time that we needed to take back at least a portion, if not all, of the ease in monetary policy that we enacted last fall in the face of chaotic financial markets. Certainly, the prospects for external growth, the fact that we have not yet seen a rise in inflation, and that some of the temporary factors that have been keeping it at bay are unwinding give me even more cause to think that we should unwind that easing in monetary policy. So the question today for me was not whether to tighten but how much to tighten. I know there's a great deal of uncertainty now and I accept the point of the research on this subject, which is that the more uncertain we are the more slowly we should move, taking time to assess things. That strikes me, as others have said, as rather intuitive.

Now, both the Greenbook and our own forecast suggest that at least 50 to 75 basis points of tightening are needed this year just to keep a lid on inflation in 2000. Keeping the lid on inflation thereafter will require much more, as the longer-run analyses suggest. It's true that these analyses are done in a traditional way, using the traditional constructs of most of our models, and they are subject to a lot of uncertainty. They incorporate some estimates of the output gap; they incorporate a revision to trend productivity; and they also incorporate assumptions about NAIRU. Some people would debate the validity of this structure. Certainly, if we continue to have accelerating productivity growth, these estimates of output gap and NAIRU and so forth may be wrong. But in a time of uncertainty, it certainly seems that relying on constructs that have helped us bring about nearly 20 years of better economic conditions--milder cyclical turns, ever lower inflation, lower unemployment, and more sustained growth--has validity. It seems appropriate to look back on the things that have helped us create the kind of environment that President McDonough referred to, one in which more people are working, more people have that experience of working, and the benefits of growth are shared more fully by all. I think the argument really turns on whether we want that environment to continue. If we want it to continue in a way that extends the experience of those 20 years, then we need to be careful in containing inflation and in following the constructs that have helped us get where we are.

So, assuming monetary policy should be forward-looking even in a time of uncertainty, we do need to tighten policy now. I agree with the proposal for 25 basis points. The next question is what to say about it. Based on the analysis both in the Greenbook forecast and in our own forecast, I do think we are likely to need to do more. In that regard, I favor keeping an asymmetric directive. Jack Guynn outlined all of the many reasons why I think asymmetry makes more sense at this time.

I wonder whether what we're seeing now in terms of the market reaction to what we've said about our tilt is as much a reaction to the change that we've introduced in announcing the tilt as it is to anything else. Over time, as market participants get used to our announcing this and moving or not moving at the next meeting, I wonder if their reactions are going to calm down considerably; perhaps as we get used to it the market will get used to it as well. In my view one of the reasons we decided to do this was to improve information to the market from the Committee itself rather than from disparate members of the Committee. In that regard, the premium is on honesty. In order to be honest about what I feel the course of future actions should be, the directive should be asymmetric.

Finally, to reiterate another point that I believe Jack Guynn mentioned, 25 basis points, no tilt, but some hawkish language, as has been suggested, may well create a bigger market reaction when all that comes out. There will be more uncertainty about how we're using this language. Frankly, without an asymmetric tilt, I think we're likely to see the market get ahead of itself--experience a somewhat euphoric increase, thinking that we are not engaged in the kind of tightening that I believe most people think is necessary.

CHAIRMAN GREENSPAN. Thank you. As I read the Committee, we're strongly in support of a 25 basis point increase and modestly in support of symmetry. So I would suggest that we read the directive in that context and then proceed to vote.

MR. BERNARD. This time we're on page 22 of the Bluebook, at the bottom of the page: "To promote the Committee's long-run objectives of price stability and sustainable economic growth, the Committee in the immediate future seeks conditions in reserve markets consistent with increasing the federal funds rate to an average of around 5 percent. In view of the evidence currently available, the Committee believes that prospective developments are equally likely to warrant an increase or a decrease in the federal funds rate operating objective during the intermeeting period."

CHAIRMAN GREENSPAN. Let's vote.

MR. BERNARD.

Chairman Greenspan	Yes
Vice Chairman McDonough	Yes
President Boehne	Yes
Governor Ferguson	Yes
Governor Gramlich	Yes
Governor Kelley	Yes
President McTeer	No
Governor Meyer	Yes
President Moskow	Yes
President Stern	Yes

CHAIRMAN GREENSPAN. I have drafts of a number of different announcements concerning this decision, and I'll read the one that I think most closely reflects the Committee's views:

> The Federal Open Market Committee today voted to raise its target for the federal funds rate 25 basis points to 5 percent. Last fall the Committee reduced interest rates to counter a significant seizing-up of financial markets in the United States. Since then much of the financial strain has eased, foreign economies have firmed, and economic activity in the United States has moved forward at a brisk pace. Accordingly, the full degree of adjustment is judged no longer necessary.
>
> Labor markets have continued to tighten over recent quarters, but strengthening productivity growth has contained inflationary pressures
>
> .
>
> Owing to the uncertain resolution of the balance of conflicting forces in the economy going forward, the FOMC has chosen to adopt a directive that includes no predilection about near-term policy action. The Committee, nonetheless, recognizes that in the current dynamic environment it must be especially alert to the emergence, or potential emergence, of inflationary forces that could undermine economic growth.
>
> Is that wording satisfactory?

MR. BOEHNE. I think that's good.

SEVERAL. Yes.

CHAIRMAN GREENSPAN. Okay.

VICE CHAIRMAN MCDONOUGH. A Nobel prize for Don Kohn!

MR. BOEHNE. Yes.

CHAIRMAN GREENSPAN. We're early for lunch, but coffee is available. [Laughter] August 24 is the date of the next meeting.

END OF MEETING