

## Meeting of the Federal Open Market Committee

August 22, 2000

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, August 22, 2000, at 9:00 a.m.

PRESENT: Mr. Greenspan, Chairman  
Mr. McDonough, Vice Chairman  
Mr. Broaddus  
Mr. Ferguson  
Mr. Gramlich  
Mr. Guynn  
Mr. Jordan  
Mr. Kelley  
Mr. Meyer  
Mr. Parry

Mr. Hoenig, Ms. Minehan, Messrs. Moskow and Poole, Alternate  
Members of the Federal Open Market Committee

Messrs. McTeer, Santomero, and Stern, Presidents of the Federal Reserve Banks  
of Dallas, Philadelphia, and Minneapolis respectively

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

Mr. Beebe, Ms. Cumming, Messrs. Goodfriend, Howard, Lindsey, Reinhart,  
Simpson, and Sniderman, Associate Economists

Mr. Fisher, Manager, System Open Market Account

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

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

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

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

Mr. Kumasaka, Assistant Economist, Division of Monetary Affairs, Board of Governors

Mr. Connolly, First Vice President, Federal Reserve Bank of Boston

Ms. Browne, Mr. Hakkio, Ms. Krieger, Messrs. Lang, Rasche, Rolnick, and Rosenblum, Senior Vice Presidents, Federal Reserve Banks of Boston, Kansas City, New York, Philadelphia, St. Louis, Minneapolis, and Dallas respectively

Mr. Sullivan, Vice President, Federal Reserve Bank of Chicago

Mr. Tallman, Senior Economist, Federal Reserve Bank of Atlanta

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CHAIRMAN GREENSPAN. At the outset I want to welcome Tony Santomero from Philadelphia to his first meeting. I assume that you have been given the various paraphernalia you will need, including a FedSpeak dictionary? [Laughter] Our first presentation is usually indecipherable even with the dictionary! I call on Peter Fisher. [Laughter]

MR. FISHER. All right. Thank you, Mr. Chairman. [Laughter]

VICE CHAIRMAN MCDONOUGH. That was meant as a compliment!

MR. FISHER. At least I'm worthy of note. I'll be referring to the usual package of indecipherable charts, which have been relabeled specially, in accordance with your wishes, Mr. Chairman.<sup>1</sup>

CHAIRMAN GREENSPAN. Thank you very much.

MR. FISHER. The top panel on the first page depicts forward and current deposit rates. Since your last meeting, both the current and the 3-month forward deposit rates have declined. And the current 3-month LIBOR rate is about 10 basis points lower than at the time of your last meeting. Moreover, the 3-month, 6-month, and 9-month forward 3-month deposit rates are all more or less right on top of each other, yielding 6.8 percent. If one assumes the existence of some term premium, the fact that the 9-month forward rate is about the same as the 3-month forward rate implies that something funny is going on, or at least that the market may be expecting an easing or is filled with uncertainties. I think it's very hard to sort out whether this is one of those cases where uncertainties about the state of macroeconomic conditions and fiscal and monetary policy in the first quarter of next year are leading the market to price interest rates for differing maturities in a glob together. But implicitly, it looks as if the market is pricing in an easing in the further-out contracts.

Looking at the euro area, euro current and forward rates have risen since your last meeting. It is noteworthy that this is the first time in the

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<sup>1</sup> A copy of the charts used by Mr. Fisher is appended to this transcript. (Appendix 1)

euro's history that those rates have moved in an opposite trend from our forward rates for an extended period of time. Recent ECB musings and their bulletin about inflation risks pushed the rates up most recently.

In the bottom panel on the page, you can see that the Bank of Japan finally did it--raising their rates, as everyone knows, on the 11<sup>th</sup> of August. I think it is worth going back over some ground here. Forward rates and current deposit rates in Japan backed up in late June as they have every year for the last several years, as all the contracts start to incorporate forward period-end dates--the fiscal half-year ending in September, the calendar year-end in December, and the fiscal year-end in March. And that elevated all the deposit rates as it has very consistently for the last several years. They remained elevated into early July, as the market began to anticipate a Bank of Japan move at its July meeting. Then with the Sogo bankruptcy just a few days before that July 17<sup>th</sup> meeting, the rates came off as the market concluded the BOJ wouldn't be moving in the event. Indeed, the decision was for no change in rates. Then rates began to price up in anticipation of the meeting on August 11<sup>th</sup> when in fact the BOJ did raise rates. One point worth noting is how much steeper the rise in the current 3-month deposit rate was than the anticipation. I think that reflects the fact that Tokyo bankers have for the first time in a decade had to deal with an increase in rates and how to price deposits in such an environment.

Turning to the next page, I thought I'd briefly discuss the plight of the euro. The top panel shows the 10-year and 2-year dollar and euro swap rates and the middle panel depicts the differential between those rates--the 2-year and the 10-year dollar/euro differentials. And in the bottom panel I have plotted the euro exchange rates against both the dollar and the yen. Since the start of May, the 2-year differential has narrowed almost 100 basis points, approximately half due to our rates coming down and half to theirs going up. The 10-year differential has narrowed almost entirely as a consequence of our rate coming down, with only a very little uptick in their 10-year rate. While the initial narrowing of these differentials coincided with the euro's brief rally off historic lows in May, at first appearance the more recent narrowing in interest rate differentials seems to have done little for the euro. The euro has drifted back down to its springtime lows and was trading below 90 again this morning. I think a better interpretation, looking back, is that in all likelihood the euro would have been a great deal weaker had these interest rate differentials not narrowed as they did.

Forecasts for euro-area growth have been revised up to around, and in some cases even above, 3-1/2 percent, while forecasts of U.S. growth have tended to be revised down toward that neighborhood, just north of 3-1/2 percent. Many market participants, myself included, had long expected that a convergence of anticipated growth rates and the erasing of a growth

differential would be the signal for a strengthening of the euro. But that has not been the case. I think European business confidence continues to express itself in a quest for outward investment, particularly into North America. And the capital markets in general have been mesmerized by the graceful moderation of growth in the United States and the continued productivity gains, both of which for the time being are reflected in the strength of the dollar.

On the next page, I have depicted the four domestic yield curves that I show you from time-to-time--those for U.S. Treasuries, interest rate swaps, Fannie Mae, and the Ford Motor Company--on three selected dates. In green is the yield curve in July of last year, in blue the curve on the day after your February meeting, and in red the most recent reading as of last Friday. Most are noticeably lower than they were in early February of this year. The one exception is Ford Motor Company's yield curve, which is almost identical to where it was in February. But I think it's important to note that that is not only fairly typical of corporate yields but also probably reflects the strength of issuance we've had over the last few months. So that outlier is more likely indicative of a supply effect than a market-driven expectation for interest rates.

Turning to page 4, I thought I'd briefly go over the impact of the announcement we made in July of the changes in our operations with respect to outright purchases. We announced on July 5<sup>th</sup> that we would tend to concentrate more on outright purchases for the System Open Market Account at the short end of the yield curve and lean more toward purchasing off-the-run issues and limiting our participation in the primary market. The top panel shows the eurodollar futures strip for September and December 2000 and for March 2001 as background, in terms of policy and macroeconomic expectations. The middle panel depicts 2-year and 10-year Treasury yields, which you can see follow a more or less consistent pattern.

From the time of our announcement on July 5<sup>th</sup>, 2-year yields did outperform 10-year yields very marginally until the auction of the new 10-year issue on August 9<sup>th</sup>, when the relationship began to reverse. But this behavior is really consistent with the economic data the market was seeing and with our announcement that we would be buying more in the short end. Those factors may have given a slight boost to the short end of the yield curve, but it's very hard to parse that out from the policy impact. The short end was rallying across the curve, as you can see in the top panel.

In the bottom panel, I've depicted one measure of the differential between on-the-run and off-the-run yields in the Treasury market. Here it is a little easier to see that our announcement had an impact. After July 5<sup>th</sup> you can see a narrowing of these spreads. There is a lot of noise in this

series, especially as we come up to the new auction where the cycle will change and a new 10-year issue will come into the market. But we did seem to have an impact, as we expected. We hoped to avoid having much of an impact on the shape of the yield curve, and I think we succeeded, but our announcement did seem to affect the off-the-run spreads.

Turning to page 5, let me go over our operations since the last meeting. At the time of your July meeting our reserve needs were projected to grow as a consequence of economic factors by a little over \$8 billion in the intermeeting period, as indicated in the first column of numbers. We expected to redeem about \$15 billion net of Treasury securities, so that was going to add to our reserve needs. And then, given our forecast of a slight decline in total nonborrowed Fed balances, we thought we'd have to do about \$22 to \$23 billion in combined repo and outright operations.

The next column depicts where we were in fact through yesterday. The autonomous factors drained fewer reserves than we anticipated. Most of the \$6.2 billion differential between our forecast and the actual was a result of less demand for currency than we expected. Our redemptions were somewhat lower at \$12 billion, not \$15 billion. The Treasury upped the size of its bill offerings a bit and that reduced how much we were going to redeem under our 35 percent limit. Thus we had less of a need to add reserves than we had expected, \$14 billion rather than \$22 billion.

Looking forward to the next intermeeting period through early October, we are expecting autonomous factors to drain about \$4-1/2 billion, SOMA redemptions to be about \$5-1/2 billion, and our need from September 6<sup>th</sup> forward to grow by about \$9 billion.

On the next page in the top table, the numbers in the left-hand column are the ones I showed you last time, indicating that we purchased about \$12.8 billion in outright securities from January through June. So, in the first half of the year we purchased a little over \$12-3/4 billion. Just in the past intermeeting period we purchased \$12-1/2 billion--rather aggressive on our part. But under our new guidelines we thought that was manageable and we did that. In the table below you can see that the average level of repos outstanding, with the shift in reserve needs less steep than we expected, has declined to about \$11.5 billion, in contrast to \$16.5 billion in the period ending June 28<sup>th</sup>.

Looking forward, I don't think we'll try to buy another \$12 billion in Treasury securities between now and your next meeting. But in all likelihood we will try to purchase something on the order of \$10 billion by your November meeting, probably doing \$5 billion between now and the

next meeting and \$5 billion from that point to November. Obviously, as I'm going through this, if members of the Committee have opinions on the appropriate pace of this activity, I would like to hear your views.

Finally, I might just note a couple of other points, Mr. Chairman. At the last meeting I mentioned that the Treasury was very seriously considering changing the bidding rules for foreign central banks to curtail their ability to bid noncompetitively because of the uncertainty that preferential bidding procedure gives the Treasury in managing its cash balance. As I said at the time, this is overwhelmingly an issue of managing relations with the

The Treasury did not announce that change in early August, as originally planned, in part to ensure that our Japanese colleagues understood what was likely to transpire and were comfortable with the way we could work with them on this. This is a matter of some considerable sensitivity. The market has become aware of the fact that if the current bidding procedures for the foreign central banks continue, by the middle of next year that will overwhelmingly dominate the market. The market has realized that something has to give. I don't think there have been any leaks on this matter.

CHAIRMAN GREENSPAN. There will be no market if everyone is willing to accept the market price but nobody has a transaction.

MR. FISHER. That's right, Mr. Chairman. So the market is waking up to this situation. It isn't really an issue of the 10-year fiscal forecast. It is a matter of the maturity schedule over the next two years. There is likely to be a noticeable decline in issuance about a year from now, as the amount the Treasury has to roll over declines sharply. The Treasury and we at the New York Bank are trying to work with both

to ascertain their comfort level with this change and our announcement of it. The question is whether to announce this in September or to wait a little longer and work a little harder in our discussions with the . That is something the Treasury will be deciding in the next couple of weeks.

Mr. Chairman, the funds rate has behaved quite well over the intermeeting period, so I'm not even going to report on that. We had no foreign exchange intervention operations to report. I will need the Committee's ratification of our domestic operations. Also, I have sent the Committee a memorandum on changes I'd like to make in coordination with the Treasury on the investment of the System's euro reserves and I'm hoping the Committee will concur that this is a prudent thing to do. I'd be happy to answer any questions.

CHAIRMAN GREENSPAN. I think the Treasury's debt to the public is down to \$3.4 trillion minus our holdings of \$1/2 trillion or so. And a very large chunk of the remainder is held by official parties abroad. Do we have any very recent evidence on whether they are paring their holdings as the Treasury liquidates its debt or are contemplating doing so? In other words, in your discussions--or the presumed discussions that you are going to be having with the Japanese and others on the issue of bidding--are you expecting to get any sense from them that they are going to be paring their holdings of U.S Treasury securities? Or are we going to find that as the supply of Treasury issues declines, the value of them, at least to many of the central banks, will rise? It is even conceivable that they would bid higher and absorb a goodly part of the private floating supply. Do you have any indication yet of what is going on in that area?

MR. FISHER. Yes, in discussions with my central bank counterparts in other countries it is clear that a great deal is going on in that area. Let me try to distinguish a couple of classes of central banks. There are some central banks that have rather sophisticated foreign currency reserve management programs. I mean that in a complimentary way, not a disparaging way. They have thought very hard about how they want their portfolio structured and have diversified out of a simple portfolio of Treasury holdings. In that category the \_\_\_\_\_ comes to mind; they really are rather distraught at the idea of a shrinking supply of Treasury securities because they already have achieved their diversification out of Treasuries in a way they view as optimal. So that's one case where there is some concern about the shrinking supply; they don't want to be responsible for chasing Treasuries that are lower and lower in yield. But they feel a need to do that as it suits their portfolio.

Another category of central banks involves ones that are sophisticated but more aggressive. I mean that in a slightly less complimentary way. They are trying to generate as much

yield as they can, rather aggressively. They've diversified out of Treasury holdings pretty effectively. And they will look at this as a very opportunity-driven situation and probably will shift as yields change. I think of \_\_\_\_\_ as the sine qua non of this group.

\_\_\_\_\_ which they want to leave in Treasuries. They don't want to change that strategy. I have some grave concerns, as do my colleagues at the Treasury, that \_\_\_\_\_ left to their own devices, would bid to hit in every auction in which they feel a need to participate. They could push yields lower very fast if they took a rather mechanistic attitude. We've done some analysis, which I've shared with staff here at the Board and the Treasury, and have concluded that at least over the course of next year, 2001, we could work with \_\_\_\_\_ authorities and perhaps get them to diversify their holdings. What we are thinking about is essentially 10 percent of their holdings across the entire spectrum out to 10 years, their current maturity ceiling. They haven't gone beyond that. Their current holdings are very lumpy. In some issues next year they could well bump up against the 35 percent legal limit the Treasury puts on any one bidder. You can imagine what would happen in a Treasury auction where 35 percent of the total was being bid on with the bidder wanting the certainty that all its needs would be filled. That could really move yields around quite a bit.

So, at a very mechanical level, that's what we're trying to work out with the

We are trying to work with them with the objective of buying them another year of time in which we could help them stay in the asset class of U.S. Treasuries, but diversify themselves more evenly across all the available issues outstanding. That would buy them some time before they even need to think about diversifying into other asset classes. But undoubtedly, there are other central

banks with smaller holdings than \_\_\_\_\_, which may be in the same behavioral pattern as the Ministry, as you suggest.

CHAIRMAN GREENSPAN. Is there any chance that they would really stonewall and just continue to do what they are doing?

MR. FISHER. Yes, there is always some chance of that. But I believe \_\_\_\_\_ has very good relations with \_\_\_\_\_ and we're hopeful that the officials from both countries will be able to talk this through. I think the more junior people in \_\_\_\_\_ understand the complexity of this, and on that side of the house I'm quite confident that there is no animosity among the \_\_\_\_\_. The staff people on both sides have worked together for a long time in managing these assets. I don't think the problem in \_\_\_\_\_ is stonewalling but inertia. The \_\_\_\_\_ does not move quickly in the best of circumstances. There may be some skepticism about our fiscal forecasts. Is it all pie in the sky? And why do they really have to bother with this? And there is a question of the sophistication and interest on the part of the \_\_\_\_\_ to deal with this kind of change. It's a daunting prospect.

CHAIRMAN GREENSPAN. It is. It's sad in a sense.

MR. FERGUSON. Peter, with respect to diversification of these holdings overseas, have you seen foreign governments or foreign central banks moving more aggressively into GSEs or have they been moving out of GSEs? I know some of them do hold GSEs. Do you know how they have been dealing with those holdings?

MR. FISHER. Yes, there may have been something of a rotation there--we have custody of their holdings of GSEs--but it's been pretty stable. It has not really been changing much in total. Some may have been driven to them and others were dissuaded from thinking of holding them as the

single answer to the problem by some of the statements about GSEs of the Chairman and the Secretary of the Treasury over the last eight months. But it's a very delicate balance. They want to put their funds somewhere in our markets. And I believe they will take a more cautious attitude as to the amount of their exposure in GSEs. But many of them are not in a position to avoid that asset class. It simply is not something that makes sense for a large holder of fixed income products. But I don't think their GSE holdings are growing very rapidly at present.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. I don't understand why the U.S. Treasury should be unhappy if the are willing to hold U.S. Treasuries at 2 percent or some unusually low yield. It would seem to me that if the market understands why this has come about, it won't cause any trouble. It would just benefit the U.S. taxpayers.

MR. FISHER. Obviously, it's not the level of the yield, which would be a saving for U.S. taxpayers. It's the lumpiness of the In one five-year auction they might take down 35 percent of the offering and in the next one they wouldn't participate. And we don't really have any way for the market to get a transparent sense of what the are going to bid for. We have put details about the composition of our portfolio on line, with weekly updates. I'm not expecting the to do the same in the near term. So it's mostly a question of the disproportionate size of their holdings of individual issues and the fact that aggressive behavior by them would have a volatile effect on our auction outcomes.

CHAIRMAN GREENSPAN. And yields.

MR. FISHER. And, therefore, market yields.

CHAIRMAN GREENSPAN. Which in turn is likely to have a negative effect on the propensity of foreigners' willingness to hold U.S. Treasuries.

MR. FISHER. Yes, absolutely. The feedback effect of making the market more volatile, more quickly is a concern.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Peter, with respect to the foreign exchange proposal in your memo, is this going to be announced publicly or to the markets in some way?

MR. FISHER. Yes, in due course. It would need to come out in the quarterly report on our foreign exchange activities that we produce jointly with the Treasury. The announcement effect is something that I think the Treasury in particular needs to be sensitive to in terms of our relations with other ministries of finance as issuers of debt. So the language I used in that last paragraph about public announcement has the type of wording that we have been discussing with the Treasury for inserting in the quarterly report. My basic posture would be that if the Treasury thinks it important to preannounce it in some way, I'd leave that to them.

MR. BROADDUS. I think it's fine to do this, as we discussed earlier, as a housekeeping item. But it occurs to me, given the condition of the euro, that this could be seen by at least some people in the markets as a signal that we may be more inclined and more willing to intervene in foreign exchange markets than we have been in recent years. I would hope, however it comes out, that we would be sensitive to that possible interpretation and not do anything to reinforce it.

MR. FISHER. Yes, we certainly don't want people to think that how we invest our reserves has anything to do with our intervention appetite. And we will try to make sure that, however announced, it is communicated as "good housekeeping" in our investments.

MR. BROADDUS. I had to get that on the record!

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I have more of a comment than a question. It seems to me that a country that has a current account deficit of more than 4 percent of GDP has to be very concerned about anything that would affect foreign views about investing in that country, as your comment a moment ago suggests. I think the likelihood of our being able to lead the \_\_\_\_\_ to understand what we want them to do and have all those conversations be tranquil and pleasant is quite low. I believe we have to be very sensitive to the fact that Peter and those at the Under Secretary level at the Treasury have to have an ongoing amicable relationship with their \_\_\_\_\_. This may be a case where some of the heavy hitting has to be done by people with fancy titles who will have to take on a more aggressive, but I hope pleasant, posture in getting \_\_\_\_\_ to do what we want them to do. As your comment suggests, if we have a U.S. Treasury market that is seriously disturbed, it could have a significant negative effect on foreigners' views of whether they want to invest in a broader range of U.S. assets. Until we get our current account deficit reduced--if in fact we do--that is an outcome we simply can't afford.

MR. FISHER. Let me just add to that point, in light of President Poole's comment. The Treasury is motivated here by the cash management nuisance. They just don't want to end up with more cash than they need, which is a result the foreign add-on procedure has produced several times in the last six months. That's also a nightmare for us. If the Treasury is routinely ending up with much more cash than they anticipate, it makes it harder for us to manage reserves. So we share the Treasury's objective. And they are trying to make clear to the \_\_\_\_\_ that that is their motive--it's a mechanical issue that is driving the need to change these bidding rules. That is how we're trying to present our position. Our posture is that I am then giving them advice, as a manager of reserves, regarding how we have gone about participating in \_\_\_\_\_ and Treasury bill

auctions to avoid disturbing the market. We don't bid to hit. We try to put in a reasonable set of bids, and then if our needs are not filled at auction, we buy in the secondary market. We don't want to have an outsized impact on their markets. So we're trying to couch the conversation in terms of collegial advice about managing reserves, given the sensitivities Bill Poole has alluded to.

CHAIRMAN GREENSPAN. Further questions on this subject?

MR. JORDAN. Does this include the topic of the euro diversification?

CHAIRMAN GREENSPAN. No, we haven't gotten there yet. But if there are no further questions, we can now turn to that subject.

As you know and as Peter mentioned, he has circulated a memorandum on the issue of diversifying foreign reserves out of German euro-denominated instruments into other euro-denominated instruments. I assume that this issue, which was discussed previously, is of interest to us. President Jordan, I believe you want to make a comment with respect to that?

MR. JORDAN. Yes, first a question, though you may want to treat it as rhetorical when I get to it. What is the current dollar equivalent value, roughly, of both the Fed and Treasury holdings of yen and euro-denominated assets?

MR. FISHER. I should have that number right in front of me somewhere, but I'd say it's about \$30+ billion at current market values.

MR. JORDAN. The combined total of our holdings and the Treasury's of both yen and euro-denominated assets?

MR. FISHER. When the dollar is very strong, as it has been, the value of those foreign currency holdings goes down. That is a factual matter. I'm sorry I don't have the precise number.

MR. JORDAN. The number that stuck in my mind from a couple years ago was \$40-\$45 billion, so if the exchange translations reduced that, that's great. Is that the right amount to have?

MR. FISHER. I have no idea what the right amount of foreign currency reserve holdings is for the U.S. monetary authorities.

MR. JORDAN. Well, that was the rhetorical part of the question. [Laughter]

MR. FISHER. I thought it might be.

MR. JORDAN. We got to this situation where we hold assets that are claims on foreign taxpayers by way of historical accident in a sense. We somehow got here. And then, especially if Al Broaddus keeps prevailing, we won't intervene, which means that we don't add to that but we also don't reduce it except for exchange translation effects. There must be a point where we should step back and look fundamentally at what it is we are doing when we are holding claims on foreign taxpayers as opposed to claims on our own taxpayers. Or, if the Treasury situation were to continue as the baseline forecast suggests, claims on some other earning streams. When a central bank holds the obligations of its own federal taxpayers, as we do for the most part in our portfolio, it has monetized that debt in the important sense that those paying the interest on the debt--the taxpayers--are the same people who are benefiting from those payments. That's only true in the case of federal debt and federal taxpayers. It wouldn't be true if we were holding agency issues or state and local government issues or foreign government obligations. To have a strategy that says we're going to hold claims on the Japanese taxpayers or the German taxpayers or the French taxpayers is something that I think needs to be addressed fundamentally. Why are we holding those and how much should we hold? When we hold debt claims on our own taxpayers, they get the benefit from the monetization of that debt. In the alternative of holding foreign assets, again holding aside what's going on with the exchange rates and resulting translation, there is a cost imposed on our taxpayers if the yield on the claims of foreign taxpayers--Japanese yen debt or euro-denominated debt--is below the yield on U.S. government debt. So if there's a cost, there's presumably a benefit. And since we

--we, the Federal Reserve plus the Treasury--by our actions or behavior are imposing a cost on our taxpayers, we should think through what the benefits are on the other side and try to keep those in balance. I would think in principle that the answer to the question of what is the right amount involves asking to achieve what end? What are the costs and benefits of holding any foreign currency reserves? I have a hard time getting myself back to the point where it makes sense for our country, maybe uniquely in the world, to hold any official assets that are claims on foreign taxpayers.

CHAIRMAN GREENSPAN. There is a history to this, as you know. Clearly, if the general policy of the United States government were never to intervene in the exchange markets, then the optimum amount of foreign exchange reserves would be zero. The trouble with that, because the Treasury has the presumed ultimate authority to determine our international financial policy, is that Treasuries change from one administration to the next and policies within any particular administration change. So it's very difficult to get a formalized policy directed precisely at the question of the cost-benefit analysis of what our reserve position should be. It was a moot issue for a long period of time because, as the dollar deteriorated through most of the period when we had reserves, we were engendering capital gains and nobody cared. And if our official forecast, at least as embodied in the Greenbook materializes, we will generate capital gains again. And one can argue that it may be desirable to do that. But I think the truth of the matter, as you correctly point out, is that every time we've endeavored to come at this issue in a formalized policy-oriented manner, we have failed largely because it is not the Federal Reserve that has the ultimate authority to make that judgment. My impression basically is that it has become an issue that nobody wishes to confront. And I guess that's really underscored by the fact that none of us knows exactly how much we have in the way of reserves, whereas 5 or 10 years ago I could tell you how much we had within

25 francs--Swiss francs, that is--when we used to hold them. But I would gather that if the dollar continues to strengthen and if the losses we publish, which are true or real losses, rise substantially, Congress is going to start to react. It hasn't. I haven't received a single note, question, or anything of that sort in any of my contacts with the Congress. And to my knowledge neither has the Treasury. But that doesn't answer your question. Maybe the thing to do--not now because we're approaching a potential change in administrations--is to have that issue be one of the early items on the agenda for discussion with the next administration.

MR. JORDAN. I would suggest as we all think about this--and we can't avoid thinking about it because of surpluses as far as the eye can see, so to speak--that we look back to the earlier practice of exchanges of foreign assets with our foreign counterparts. I know it's the Treasury's call, really. But if it were to turn out that central banks in other countries chose to reduce their holdings of U.S. government obligations, I think we should at least be open to opportunities to do an off market swap or exchange of currencies.

CHAIRMAN GREENSPAN. We can do that now without reference to any particular federal surplus or deficit. Well, I grant you that if the Treasury were going to do it specifically, it would--

MR. JORDAN. It would get to the question of the composition of our portfolio, what we have in, say, euro-denominated assets versus something else, because some things might have to happen. Say we wind up only owning claims on German and French taxpayers but not on Japanese-- and I think right now why we hold so many claims on the Japanese taxpayers is an interesting question. But if, say, an island off the coast of mainland China decided it wanted to reduce its holdings of U.S. assets, depending on what it wanted to hold instead, then an off-market exchange might be appropriate.

CHAIRMAN GREENSPAN. You are talking about Quemoy? [Laughter]

MR. JORDAN. That, too! I'm suggesting that we be open to facilitating--not intervening, I know--in such a case by engaging in an off market transaction that would result in a reduction of our holdings of assets denominated in foreign currencies in exchange for taking their holdings of U.S. government obligations into our portfolio. I wouldn't want us to preclude the idea that those types of transactions could be done.

CHAIRMAN GREENSPAN. I think that issue really ought to be on the agenda for one of our early Treasury lunches with the new administration. We bring it up every once in a while with the hopes that they will rationalize their policy. And we might as well keep trying. Are there any further questions with respect to the euro diversification issue that's reflected in Peter's memo? I hear no objection, so I assume that you could proceed with that. We need a vote on domestic operations.

VICE CHAIRMAN MCDONOUGH. Move approval of the domestic operations.

MR. PARRY. Second.

CHAIRMAN GREENSPAN. Without objection. Also, in my enthusiasm to welcome our new member, I forgot to ask for a motion to approve the minutes of the previous meeting and I do so now. Would somebody like to move approval?

SPEAKER(?). So move.

SEVERAL(?). Move approval.

CHAIRMAN GREENSPAN. Without objection. Let's now move on to the staff briefings and the Committee discussion. I call on Dave Stockton and Karen Johnson.

MR. STOCKTON. In putting together this forecast, we had to address two central questions: First, is the economy really slowing? And second, how much does it need to slow in order to prevent inflation pressures from

building? To jump right to the bottom line, our answer to the first question is, yes. And our answer to the second question is, not by as much as we previously thought.

Let me turn first to the question of the extent of the slowing in economic growth in recent months. At the time of the last forecast, there were only tentative signs of the deceleration in activity that we were projecting. Since then, the evidence of slowing has accumulated. Indeed, if anything, we have been surprised more often than not on the down side. It still would be premature to declare with confidence that a durable step down in the growth of output has arrived, but the odds of that event are looking considerably higher than they were a couple of months ago.

For one, the job market appears to have cooled noticeably since last winter. To be sure, some of the slowing of private payroll employment growth probably just reflected a shift in the seasonal timing of hiring induced by warm winter weather and strong overall activity. And, no doubt, there have been more than a few instances in which hiring has been held back by a lack of qualified workers. But given the breadth of the slowdown and the absence of any apparent upward pressure on the workweek that might be expected to accompany widespread worker shortages, we believe that a slowing in labor demand has been the more important factor underlying the recent drop-off in the pace of hiring.

On the spending side, tighter monetary policy appears to be leaving its clearest mark on housing activity. Starts of single-family homes have trended down since the beginning of the year, and the permits data give us little reason to discount this decline. Combined with a drop-off in sales of new homes and weaker prices and production of construction materials and supplies, the data paint a reasonably consistent picture of softer demand in this sector.

Much the same can be said for motor vehicles. After the astounding pace registered earlier this year, car and truck sales have slowed considerably--albeit to merely a very strong pace--and inventory overhangs have developed for a few models. At present, the automakers are dealing with these spotty problems by raising incentives and moving quickly to trim production where necessary. Indeed, a drop in assemblies contributes importantly to our projected second-half deceleration of real GDP.

Outside of the auto sector, real PCE slowed sharply in the second quarter, and, although we are forecasting a larger gain in the current quarter, the projected increase in spending remains well below that seen late last year and early this year. But here I'd have to admit that, with consumer confidence remaining elevated and with only one month of data in hand, this

key element in our outlook remains more forecast than fact. Given our view that the impetus to spending from wealth should be waning after about 8 months of relatively flat equity prices, we are comfortable with the underpinnings of our consumption forecast. But the more subdued pace of spending that we are projecting is far from baked in the cake.

In contrast to the signs of slowing in household spending, business outlays for capital equipment have continued to surge ahead. One of the most notable aspects of the recent annual revision to the national accounts was that the investment boom of recent years is now estimated to have been even stronger than previously thought. Moreover, there are few signs, if any, that higher real long-term interest rates have put an appreciable dent in the demand for equipment and software. It just doesn't look like this boom is about to dissipate any time soon.

This brings me to the second question: Does the economy need to slow? We still think the 6 percent pace of the past four quarters is not sustainable. But because of our supply-side revisions, that pace is not as far above potential growth as before. With the revised data showing a higher level of investment and with the near-term indicators pointing to continued strong growth in capital outlays going forward, we found ourselves forecasting an economy in which the growth of capital services will be high and increasing. Moreover, the annual revisions portray a pattern of greater acceleration of actual labor productivity, with the annual increase through the second quarter of this year in excess of 5 percent. There are a number of reasons for discounting the extent of the recent pickup in the nonfarm business figures, but any way we look at it, the performance of productivity has been phenomenal.

Taken together, these observations motivated our upward revisions to the growth of structural productivity and potential output. Indeed, given both the mounting contribution from capital deepening implied by our investment forecast and some further improvement in the growth of multifactor productivity, we are projecting a modest ongoing acceleration of structural productivity--3-1/2 percent this year and 3-3/4 percent in 2001, up about 1/2 percentage point from our last forecast.

The revision to structural productivity not only affects potential GDP, it also has important implications for the demand side of our forecast. In particular, it boosts the growth of real incomes and spending and is the chief reason that we have adjusted up our real GDP growth forecast by a half percentage point in 2001 to 4 percent.

This outcome might seem somewhat surprising in light of many of the simulations we have shown you in recent years. In those simulations, faster

trend productivity growth typically caused growth in demand to outstrip that of the productivity-enhanced growth of supply, at least for a time. As you will recall, an important channel for that effect came through the influence of faster productivity growth on asset values and, consequently, on consumption and investment. But our interpretation of recent events is that while we hapless economists have been only slowly marking up our forecasts for productivity growth, the markets and private-sector agents had already been anticipating this improvement. Thus, we are not looking for any additional increment to spending from a further productivity-driven rise in the stock market.

On net, our revisions to the demand and supply sides of the forecast were nearly a wash for resource utilization. In this projection, we anticipate the unemployment rate to rise to about 4-1/4 percent by the end of next year, just a bit above our June forecast. By our assessment, this remains too low to prevent a further gradual deterioration in inflation. For this reason, our forecast assumes some further tightening of monetary policy next year, as core inflation drifts higher.

Of course, major question marks continue to surround this element of our forecast. But we read the incoming wage data as suggesting that labor markets remain extremely tight. Virtually all of the data on hourly compensation have come in to the high side of our June forecast--decidedly so in the case of the ECI, which outstripped our second-quarter forecast by nearly a percentage point at an annual rate. Although we have carried only a bit of that surprise forward in our projection, we expect to see continued upward pressures on compensation.

That said, these upward innovations to our wage forecast have been more than offset by our faster estimated structural productivity growth, which has acted to damp the rise in unit labor costs. As a result, the uptrend in price inflation is more gradual than we were previously projecting. We now anticipate that core PCE price inflation will move above 2 percent by the end of next year, a couple of tenths below our previous forecast, though still nearly 1/2 percentage point higher than its current pace.

Obviously, a wide range of uncertainty attaches to many important elements of our forecast. But the changes that we have made to this projection bring into sharper focus the risks associated with our investment forecast. We are projecting some slowing in equipment spending from its recent pace in response to rising interest rates and some deceleration of final sales and profits. If the slower growth of earnings that we are expecting to accompany a period of below trend economic growth came as a significant disappointment to businesses, there could be a sharper retrenchment in capital spending than we are forecasting.

The largest and most immediate effect of that retrenchment would come on the demand side of the economy, especially as multiplier-accelerator effects amplified any slowing of capital spending. Reduced investment would also attenuate the productivity-enhancing effects of capital deepening on the supply side of the economy. All in all, any serious scaling back of investment would risk some unwinding of the virtuous cycle of investment, productivity, and price restraint from which we benefited in recent years.

With the return to capital having been well maintained despite an investment boom that has lasted more than five years and with no signs that business demand for new equipment is letting up, we are reasonably comfortable with our forecast of continued strong investment spending. But clearly, this is an area that will bear close scrutiny in the period ahead.

There are also upside risks to demand associated with our outlook for the supply side of the economy. As I noted earlier, we have assumed that much of the good news on the supply side already has been discounted by the markets. If we are wrong, and the enthusiasm of investors is rekindled by the pace of productivity growth envisioned in this forecast, a Fed perceived to be on hold, and no marked near-term deterioration of inflation, then a snapback in equity markets, with the accompanying consequences for faster growth of private spending and higher resource utilization, could present a more difficult environment in which to make policy.

Karen will now complete our presentation.

MS. JOHNSON. After the Greenbook was finalized last week, we received trade data for June. The figure for the trade balance surprised us a bit. Both exports and imports grew more rapidly than we or BEA had penciled in for June, with exports showing the larger upward revision. We would now project second-quarter GDP growth at a 5.1 percent annual rate, rather than the 4.9 percent in the Greenbook.

The strength in June exports is consistent with the basic message in the Greenbook regarding the global economy: Economic activity in the rest of the world is expanding vigorously on average. Many industrial and developing countries have gone a long way toward closing output gaps--in some cases eliminating ones that had opened widely during the crisis years of 1997-1998. Inflation pressures, while for the most part not too far advanced, are beginning to threaten in some countries. In response, central banks in several industrial and developing countries have already increased official lending rates; and our Greenbook forecast incorporates the assumption of further tightening moves.

One notable exception in this generally favorable picture is Japan, although some signs of economic recovery have emerged there as well. So far, that recovery has largely taken the form of expanding private investment spending, and it seems fragile to us. Japanese household consumption spending remains restrained, although recent signs are positive. Fiscal stimulus is likely to diminish next year, as some of the elements of the supplementary package from nearly one year ago finally have their effect but quickly run their course in the near term and others lapse without ever being acted upon. We see real output in Japan continuing to grow, but weakly. The Bank of Japan moved recently to end its zero interest rate policy, amidst controversy with other government officials over whether the conditions for such a move had yet arrived. We judge that the pace of recovery in Japan will not warrant further moves in the near term, and in our forecast we have assumed no additional measures by the Bank of Japan over the next six quarters.

The projected strength of foreign output is an important factor underpinning our outlook for continued robust growth of exports. Another is the moderate rate of decline we have again forecast for the exchange value of the dollar, starting next quarter. The fundamental reason for this expectation is the growing net international indebtedness of the United States and the associated rising total of claims on the U.S. economy in foreign portfolios. But as the last few years have clearly shown, we have no way of determining when the foreign appetite for dollar claims will stop expanding. As long as foreign investors judge U.S. investment opportunities to be more attractive than those elsewhere, capital inflows will respond, and the dollar could well remain strong. One argument in favor of an early adjustment in the dollar is our expectation that further monetary tightening moves abroad are likely in the near term, especially by the central banks of key foreign industrial countries, whereas the Greenbook path assumes an unchanged U.S. federal funds rate until later in the forecast period. The projected depreciation of the dollar also acts to slow import demand in the Greenbook forecast.

Because our path for the dollar has a sizable impact on the staff outlook, we included in this Greenbook an alternative scenario using the global model in which the dollar continues to strengthen throughout the forecast period. In particular, we simulated the outcome under the assumption that the dollar continues to trend up and by the end of next year reaches a level about 8 percent above its second-quarter average. In that case, the staff model suggests that both GDP growth and core inflation would be about 1-1/2 percentage point lower in 2001 than in the current forecast.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Karen or Dave, the new Greenbook assumptions for potential growth and your forecast for actual GDP growth are, I believe, way above the market consensus if one looks at the Blue Chip forecasts, for example. What do you think the chances are that the baseline forecast may actually be accompanied by a stronger foreign demand for our capital and also a stronger dollar? It seems to me that that would be the most likely outcome, given these changes in the assumptions in the Greenbook forecast. I think this is particularly important since, as your alternative simulation indicated, that would take some of the pressures off inflation.

MS. JOHNSON. It certainly is a reason why we thought this was the right time to include that alternative as opposed to some other alternative. Nevertheless, it's not unlike the problem David described with respect to the stock market. Will 4 percent growth in 2001 come as a big surprise to everybody? In that case, a range of asset prices might adjust, including the U.S. stock market as well as the dollar. Will it come as a surprise to some but not to others, and will it have a differential impact on assets? We can't rule that out in some sense. We've often seen news move the bond market and stock market in ways that don't seem entirely consistent.

To be honest, I don't know. I can tell you that most of the public forecasts that I've seen do not have U.S. net exports in the current account widening the way we do in 2001. And when I look to see why, it's because those forecasts have much lower U.S. growth than we have. So I have to believe that outcome, if it materializes, is going to be a surprise to some forecasters. But whether it will be a surprise to investors is something we really have a hard time judging at this point.

MR. STOCKTON. Just to follow up on that: I indicated in my remarks that we hapless economists are slowly writing up our forecasts for productivity growth. I think the Blue Chip

forecasters may be even more hapless than we are. Those forecasts suggest considerably lower potential output growth than we have. That just doesn't seem consistent with what one hears.

MR. PARRY. Well, I'm not saying that their forecast is right.

MR. STOCKTON. No, but it doesn't seem entirely consistent with the earnings expectations that one hears in financial markets.

MR. PARRY. But when they are more convinced about the truth--which is found in the Greenbook, of course--that would probably affect investors' appetite for dollars.

MR. STOCKTON. As both Karen and I indicated in our remarks, we certainly upped the risk in that regard. We made the assumption that it has been largely discounted, but we're not totally sure about that.

MR. PARRY. Thank you.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. David, you may have touched on this and if you did, I missed it. You have a very weak projection for housing activity in this quarter and also going forward for at least the next couple of quarters. It's important, I think, because that dip in housing activity is a significant element in the slowing of growth that is forecast for the second half of this year. Mortgage rates have come down significantly in the last four or five weeks. I was just wondering if you have taken full account of that. Or is that a risk in the outlook?

MR. STOCKTON. We think we have taken account of that. It is still the case, obviously, that mortgage rates are up considerably from their lows and that ARM rates also are significantly higher than they have been. This is an area of the forecast where I think we have been somewhat surprised on the down side in terms of the extent of the weakening. Actually, in the next few months, we don't have further declines from where we are. We have housing activity basically

holding at current levels on the thought that the tip down in mortgage rates is probably going to provide, at least temporarily, some support for the current levels. But all of the advance indicators still suggest that activity in that sector is likely to be weak in the period ahead. There is certainly some risk to that forecast, especially because we could get a temporary bounceback if people perceive this as an opportunity to get into the market and they rush to do the buying they had put off when rates were rising more rapidly.

MR. BROADDUS. We are hearing a little bit of that anecdotally.

MR. STOCKTON. I think there are upside and downside risks there as well.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. My question is for Karen on the international side, but it does feed back on the domestic side. I'm still not sure what I ought to be thinking with regard to developments external to the United States and how that feeds back on our economy and, by implication, on our policy choices. There was the suggestion that inflationary pressures may be emerging increasingly in other countries because of the closing of gaps and that, therefore, some tightening of policy abroad might be coming along, which might tie in with a weaker U.S. dollar. But of course if all of the reason for higher nominal interest rates were higher inflation abroad compared to the past or to inflation in the United States, then in real differential terms it wouldn't have any implication for the U.S. dollar or for our policy actions. You may have had this in mind and it wasn't coming out clearly to me: If we thought that what is emerging abroad is all demand side economic activity, driven by whatever--monetary, fiscal policy stimuli or something--and that's all, that's one thing. But suppose we were to accept that some or a significant share of what is emerging abroad is supply side activity, as we are now more increasingly incorporating into our thinking about the United States. If we started to think that economies abroad were in the early

stages of what we have experienced over the last four or five years, wouldn't we come to a different conclusion about the implications for the dollar and for the feedback on the United States economy? Your alternative simulation in the Greenbook says that if the dollar is 8 percent stronger, that's going to reduce our real GDP and inflation. Well, that's mechanical. That's because of the net trade effect. But that wouldn't be true if what we are seeing, or if what we were willing to think about what we're seeing--whether it's in Latin America, Asia, or Europe--is more a supply side kind of experience that is driving their growth, their productivity, and their employment.

MS. JOHNSON. Let me answer the question in two halves. Under the assumption that the same rules apply as have for years, I think in the face of rising inflation pressures--largely, if you will, from spending shifting up in these economies--foreign central banks will bring about some, though perhaps limited, increase in real interest rates. They aren't just going to keep pace with inflation, they are going to try to constrain it and they will have small increases in real interest rates. That is in effect what we were referring to when we said we see some increases even perhaps as soon as two weeks from now. The market seems to think the ECB will act again that quickly, although today's news may have changed that. Today there was a weak survey number from Germany.

The question of whether or not the types of technological changes that have driven the U.S. secular and cyclical experience over the past several years are emerging abroad--and if so where and at what pace--is consuming numerous researchers around the globe. And that includes the people who work here in the International Finance Division. The clearest evidence is in Australia, if we want to cite a foreign country as an example. The Australians see it happening, we see it happening, and the world sees it happening in Australia. In other places people are looking as carefully as they can and they are remaining skeptical. There are some small places in Europe where

we can see this sort of thing happening. Finland, oddly enough, is one and it's not just Stolichnaya, their vodka! But, as I hinted in the Chart Show six weeks ago, we were looking in various countries for venture capital spending, we were looking for the composition of investment, and we were looking for the behavior of their stock markets. We were looking everywhere we could for evidence of it. It should be there at some point. One can make arguments about why features of certain economies may make them slower or less likely to incorporate technological change to their advantage as quickly as we do. But it's hard to believe that any of those constraints could actually keep it from happening. Could the electrification of Europe have been suppressed by some kind of bad structural policy three generations ago? I doubt it. I don't think technological change can be completely suppressed now, even with some bad policy. So we are very alert to this. The fact is that in putting together the Greenbook forecast, we were not able to find enough concrete evidence of it happening yet that we felt we should try to factor it in systematically.

I would point out that if I thought it were happening, I might be more aggressive in lowering the dollar, in the sense that the attractiveness of investment opportunities in the United States has been cited as one of the more important factors influencing the dollar. So, if those who were doing the saving in the world came to believe that investments at home were on the cutting edge, so to speak, I think they'd be only too happy to invest at home. And that could cause the dollar to fall more rapidly than we've portrayed in the tiny depreciation we have in the Greenbook.

MR. JORDAN. I agree with the partial analysis implication of that last comment, but also our export demand would--

MS. JOHNSON. It would benefit, yes.

MR. JORDAN. Certainly. I don't know what those elasticities are, but that goes in the opposite direction.

MS. JOHNSON. It does, although on the whole, given that our current account has worsened and yet the dollar has risen, we're inclined to explain that by saying the investment opportunity mechanism has been more important for the United States over the last three years.

CHAIRMAN GREENSPAN. Further questions for our colleagues? If not, who would like to start the discussion? President Moskow.

PRESIDENT MOSKOW. Thank you, Mr. Chairman. When we met in June, one of the key challenges that we faced was assessing whether the moderation in demand we'd seen at that point was real. Now we have tangible evidence in the affirmative. Both the anecdotal reports and the statistical data confirm that demand growth moderated from the first quarter to the second. Today the question we face is whether the slowing will persist or if instead we will see a rebound, as we have several times in the last few years.

Reports in the Seventh District suggest it's more likely that the moderate pace will persist in the second half of the year. In support of this assessment, the list of industries citing slowing has increased and now includes retailing, motor vehicles--especially heavy trucks--machine tools, steel, aluminum, and paper. Housing in the Midwest had been doing relatively better than in the rest of the United States, but recently it has moved more in line with the slowing that we've seen nationally. As to Al Broaddus' point, we have not seen any bounceback in the Midwest in the housing area.

In terms of consumer spending, most retailers reported overall slowing, with July sales marked by weakness in apparel and strength in home-related items such as appliances and furniture. One of our directors from the retail industry indicated that this pattern had continued into August. He said that back-to-school sales were disappointing so far. Actually, he said they "stink."

[Laughter] But customers were in the stores and buying other items. Another retailing contact noted continued but moderating gains in sales of furniture and housewares. Light vehicle sales are down

from the exceedingly strong pace earlier this year, having leveled off at an annual sales rate of 17 million units over the last three months. Automakers are not expecting sales in August and the rest of the year to deviate significantly from recent levels. However, inventories are somewhat higher than desired and incentives continue to be very important in supporting sales. One of the Big Three automakers indicated that it expects to reduce production levels later this year rather than increase incentives further. In addition, business demand has ebbed or is at relatively low levels for some manufactured products important to our District. Heavy truck makers, for example, noted continued significant slowing in activity, and some have announced layoffs. Production of farm equipment is up somewhat from the low levels of a year ago, but demand remains modest. Due to favorable growing conditions, record corn and soybean crops are projected for this year, which has contributed to lower commodity prices and extended the expected recovery period for many areas of the farm sector.

Labor markets are still tight in the Midwest, but we've had some signs and reports of modest easing. The unemployment rate for our five states has been drifting up since early this year and, while it's still below the nation's, the differential has narrowed. Some contacts in the retailing and restaurant industries noted less difficulty finding workers in the Midwest.

In contrast to this evidence, the latest Manpower survey indicates continued strong demand for labor in the Midwest and all other regions of the United States. Hiring plans for the fourth quarter are higher than in any year-end quarter in the 25-year history of the survey. However, our contact at Manpower senses that there has been some easing in labor markets; it's a feeling based on discussions with their staff and their clients rather than on hard data. The Manpower survey results won't be released until August 28<sup>th</sup>, so they should be treated confidentially until then.

Turning to the national outlook, the probability of a soft landing seems to have increased over the last two months. First, there's clear evidence of moderating demand. Second, the news on productivity growth has been outstanding. And third, core PCE inflation has remained modest in recent months. Although I still believe that the risks are tilted toward higher inflation, I'm reasonably comfortable with the current stance of monetary policy. One wild card, of course, is the outlook for a continuing deterioration of the current account deficit. The good news for now is that our high productivity growth makes the United States an attractive place for foreign capital investment. But as we discussed earlier, we must be mindful that capital flows can reverse quickly, putting pressure on the dollar and interest rates. That adjustment process would be stressful for the U.S. economy and would increase inflationary pressures. Nevertheless, my view is that the U.S. economy seems well positioned for a soft landing this year.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Thank you, Mr. Chairman. Overall, economic growth in the Twelfth District picked up in recent months, though we see signs of slowing in housing construction. Also, high and volatile electricity prices have led to some disruptions in production. For the four months ended in July, employment in the West grew at an annual rate of 3.6 percent, up from the 2.6 percent pace reported for the first quarter. This is not just due to strength in California, as employment in five other states in the West is growing well above the rate for the nation. Within the region, job growth in the Northwest is lagging the rest of the region, but it's close to the U.S. growth rate. With the strong growth in the West, labor markets remain tight. The gains in jobs have been broad-based among the service-producing sectors. While dot-coms are facing a tougher environment, available evidence in business services points to continued strong employment growth at software and Internet-related firms. However, signs of slowing in the single-family housing market are present in

much of the West. For example, single-family permits have declined this year. Moreover, outside of California, construction employment has been relatively flat in recent months. Even in rapidly growing Arizona, construction employment has contracted. In California, conditions in the housing market are more complicated. Recent weakness in single-family permits has been offset by strength in multifamily permits. There also has been substantial upward pressure on house prices in much of the state, primarily because the supply of housing has lagged woefully behind the growth in underlying demand for several years. Also, analysis by our staff provides support for the commonly held view that housing prices in the San Francisco Bay area have been boosted by the substantial increase in wealth of high-tech employees as a result of stock options. Moreover, the analysis suggests that even with the correction in stock prices this year, those wealth effects are continuing to boost housing demand in the region.

Another notable development in the West is the hike in electricity prices. This has led to higher direct costs to some users not shielded by rate freezes or fixed-rate contracts. Higher prices have meant disruptions to and rescheduling of production at some firms. In the Northwest, aluminum producers drawn to the region by the allure of low-cost hydroelectric power have announced layoffs and shutdowns of some facilities. In California, the governor reduced the cap on the wholesale price of electricity from \$500 per megawatt hour to \$250. Last week prices hit the cap on each of the five weekdays.

Turning to the national scene, the second-quarter slowdown in the growth of real private demand, especially consumption, was encouraging. Like the Greenbook, we expect slower spending growth to show up in the real GDP data this quarter. Our forecast is that real output will grow at a rate of roughly 3-3/4 percent over the rest of the year and at about the same pace next year. In making this forecast I'm aware that no slowdown is evident in investment spending. These data

suggest that there is a risk that output growth may not slow as much as we're expecting. They also suggest that productivity growth is likely to remain robust. Robust productivity growth helps keep the roughly 5 percent ECI growth we are projecting from pushing up inflation. In particular, incorporating the Board staff's productivity assumptions leads us to predict slightly less inflation than does the Greenbook for 2001. Part of the reason is that we incorporated a higher path for the dollar than is in the Greenbook. This higher path seems appropriate to us in light of the rapid acceleration assumed for productivity. Nevertheless, core inflation this year and next is still expected to be higher than it was last year. And it seems to me that the balance of risks remains tilted toward higher inflation. Thank you.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Thank you, Mr. Chairman. The economy in our Southeast region remains sturdy, but it's clearly expanding less rapidly than earlier in the year. I sense a growing caution and noticeably less exuberance on several fronts. Obviously, the moderation is most evident in housing. That slowing is now even showing up on the west coast of Florida, which has been so hot for so long. Moderation in the residential housing markets now has to be considered convincing and not just a one- or two-month phenomenon like we've seen earlier. Retailers also are giving us a somewhat different reading this time around. They tell us that while sales generally continue to meet now-lowered expectations, there are growing instances where sales have come in below expectations.

Perhaps most interesting of all to me are the comments we have been getting from our bankers over the last six weeks. There's an amazingly consistent report from our larger banks of a falloff in loan demand across the region, and it's reported to be across borrowers from many sectors. One banker reported that his bank cancelled its most recent loan review meeting because of no

agenda. Bankers tell us that a number of projects and spending plans have been put on hold until their customers can assess where things are going. I've had similar reports from large contractors who say they are seeing some projects delayed as owners have become more cautious.

Some things have not changed in our region. Tourism activity and future tourist bookings remain strong, although history tells us that's one of the last places people adjust their spending. The oil and gas industry is finally responding convincingly to higher oil prices, as rig counts are now substantially above year-ago levels and close to all-time highs. And our labor markets remain stretched with few signs of easing, especially for skilled workers. Despite this, wages and prices generally are not showing a large movement except for the passthrough of higher oil prices and pharmaceutical health care insurance program costs.

On the national front, I would agree with the Greenbook that there is evidence, particularly from the more interest-sensitive sectors, that activity may be moderating. And if one is willing to look hard enough, there are other tentative signs of moderation such as in the jobs numbers. Overall, I still judge the economy to be strong, as evidenced by the strong GDP report and the continued strength in business investment. Although I think we all would like to have locked in the very low inflation numbers we saw earlier, I view recent price movements as generally constrained. Having said that, I would join those who observe that were it not for the continued acceleration in the application of technology and the associated productivity gains, I do believe we would be facing a more troublesome set of inflation numbers and outlook than is evident today. While I think we can conclude that our policy moves helped nudge the economy in the direction of a more sustainable pace, the question remains on the table as to whether we've done enough to damp aggregate demand and better align it with supply.

We've experienced numerous shocks on the inflation front: first, the damping effects of the Asian crisis; and second, the rise in energy prices. Together these factors seem to be working their way through the economy without yet engendering acceleration in trend inflation. I'm also convinced from our model simulations that we did pay a price for our earlier reductions in rates during the Asian crisis, and that has been a factor in the upward drift in prices since 1998. I would say again that I still believe in preemptive policymaking. And if I fully believed the forecast in the Greenbook and some of our own VAR modeling work, I would be more anxious to get at least modestly more restraint in place sooner. As we continue to sort out our views on reasonable assumptions about future productivity and to identify what portion of the general price pressures we are seeing and forecasting is related to the run-up in oil prices--directly or indirectly--I think it's reasonable to let things play out a bit more. At the same time, I think it's very important to indicate that the balance of risks is on the side of potential deterioration in inflation, as a reminder to both ourselves and to others that our work may not be done. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. The overall economy for the Tenth District remains solid; it hasn't changed a great deal from last time. However, there have been some very slight signs of further slowing since the last meeting. In the interest-sensitive sectors, particularly home building, there is clear evidence of some cooling. Also, manufacturing activity appears to have slowed systematically across the District in both the durable and nondurable goods areas. And while retail sales picked up in July, the environment in that sector is clearly softer throughout the District than it was earlier this year.

However, in the other direction, nonresidential construction remains very solid in the District and energy activity has expanded fairly significantly as higher oil, particularly gas, prices

have persisted throughout the last several weeks. Labor markets remain strong in the region. Unemployment rates continue to hover around the 3 percent range. But having said that, there are no real signs of increased wage pressures. So, the situation is fairly much the same within the District.

On the national level, my views haven't changed significantly from the time of our last meeting. The economy is carrying momentum forward, but more signs of slowing continue to come in on the national level. And core inflation pressures obviously remain modest. Perhaps one way to describe our projection is to say that it is very similar to that of the Greenbook except in a couple of areas. In our analysis we don't have in mind a level of demand as strong as in the Board staff's projection. Our forecast of productivity gains is a bit less aggressive and that outcome assumes less aggressive interest rate increases over the period. So, going forward, we see some modest slowing in the economy and continued modest pressures on inflation. Thank you.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. There are a few more hints of a slowdown in the New England economy since our last meeting. Regional employment growth has slowed recently, especially in construction, in the finance, insurance, and real estate areas, and in transportation and public utilities. Residential construction contracts have turned down, as have single-unit housing permits, and existing home sales have returned to their 1999 level. However, it's not clear in either employment trends or in housing whether this observed slowing is fully a demand phenomenon or still has some supply characteristics to it. Labor markets remain exceedingly tight, with several New England states recording unemployment rates below 3 percent and the rate for the region as a whole well below--a percentage point or more--the nation's. Everywhere I go in the District, employers complain about the lack of available workers and the potential for faster growth

if only a greater supply of labor could be found. Similarly, real estate brokers report that a diminishing supply of new and existing homes is a factor in declining sales, though reduced affordability is a factor as well.

Contacts continue to report rising wage costs, though the regional data suggest that wage pressures are off a bit from their high in mid-1999. We also continue to hear reports about novel adjustments to tight labor markets and increasing investments in productivity-enhancing technology. Firms report using out-of-cycle pay raises, higher starting pay, and greater shift differentials; they also seek to offset these increased costs by reducing educational requirements for new hires and compensating for that by providing more training and using more sophisticated technology. Clearly, they believe the task of both finding and rewarding employees has become more and more difficult.

A major question for the region and for the nation as a whole is whether these signs of slowing really signal a trend. In that regard, I think the national data may be a bit clearer than the local. In New England, while job growth and housing are less robust, whether because of demand or supply or some combination of the two, manufacturing is not. Indeed, while manufacturing job counts are not expanding, they also are not declining as much as they were last year. Moreover, manufacturing contacts are extremely optimistic about demand, with one diversified capital goods manufacturer describing business as “sizzling.” Not surprisingly, this is especially true for manufacturers of high-tech equipment, with one semiconductor business reporting a 90 percent increase in revenues and a 40 percent increase in orders for the second quarter over a year ago on the heels of an extraordinary first quarter. For some, this optimism may reflect a sense of relief that things haven’t been worse, given the interest rate increases. Others, however, firmly attach their optimism to the growing demand in foreign markets, especially the Asian Pacific region. They also note rising input prices, especially oil-based inputs. But in general these rising prices are being

offset by volume discounts, electronic purchasing using the Internet, and by a continued shifting of production to foreign locations.

I've begun to host a series of luncheons with regional high-tech CEOs, focusing primarily on the subject of productivity. In particular, I've asked the CEOs who have attended to assess whether and when, if at all, trends in productivity growth are likely to level off. And while these luncheons are only in an early stage, the comments from CEOs producing very different high-tech products were surprisingly similar. First, they believe that much of the change to date has worked to create a platform from which further progress can be made or a whole range of new products produced more easily. That is, productivity growth in their view is not likely even to level off soon. Second, they believe the action--in terms of innovation--is confined almost entirely to the United States, with not much taking place elsewhere. And finally, they envisage an enormous array of opportunities in their industries looking forward. Clearly, these CEOs are optimistic about the enduring and even accelerating pace of productivity growth.

As I look at the national scene, and particularly at the Board staff's forecast, I'm struck by the fact that the authors of the Greenbook seem to be in close contact with these CEOs [laughter] and are increasingly optimistic, if not euphoric, about the potential for increased productivity. While it is increasingly easier and more tempting to become a believer in that outlook, I think some caution is warranted. Moving the growth of potential from 4.25 to 4.75 percent puts the staff's estimate well above that of most other forecasters, though recently DRI seems to have drunk from the same water.

When I look at our forecast at the Boston Fed, I'm struck by how powerful that assumption about higher rates of productivity is. Our forecast takes more of a mainstream position on potential growth--somewhere in the mid- to low 3 percent area; it also assumes the second-quarter slowing in consumption and housing will continue, and looks ahead without any change in

policy. Comparing this to the flat funds rate alternative forecast in the Greenbook, unemployment in 2001 is a half percentage point lower and PCE inflation is almost a full percentage point higher with a lower estimate of GDP growth.

The Greenbook's optimism about productivity thus makes a large difference in how one views future prospects and how concerned one is about the state of current policy. Now, I'm not saying that the Greenbook forecast is seriously flawed. Certainly, the detail and the care with which it is put together give it great credibility. But what if it's wrong? What if the near future brings slower cyclical productivity, which even the Greenbook acknowledges is possible, and inflation instead of trending down or sideways, depending on what measure is used, turns upward from its already elevated levels? Does anybody really like the fact that the overall CPI number now starts with a 3 rather than a lower number, even though oil is the main driver of the higher number? People do look to oil prices in judging their views on inflation and how they think about the future. Or are we really satisfied with the way the core rate has accelerated over the last year or so?

The cost of inflation getting out of hand could be significant in terms of financial market volatility and lost central bank credibility. Wouldn't it make more sense to be less optimistic about productivity and expect to tighten policy sooner rather than later? If we are wrong and the economy slows too much, reversing course may give markets some confidence rather than causing disruptions. It seems to me that at present there is a real asymmetry in the risks, where being wrong by using assumptions that are too optimistic is potentially much more costly than taking a more conservative, less optimistic approach. Now may not be the time to act. Some tightening is in the pipeline and the economy has begun to slow a bit. But it is also not the time to think we can throw in the towel for the rest of the year.

CHAIRMAN GREENSPAN. President Broadus.

MR. BROADDUS. Mr. Chairman, the latest information we have from our District is a bit more mixed than it was at earlier meetings this year. On the one hand, factory output has remained at a very high level in most, though not all, District manufacturing industries. Labor markets are still tight. We have low state unemployment rates also. Cathy, Virginia's rate is at 2-1/2 percent and even in West Virginia, which has perennially high structural unemployment, the rate is at about 5-1/4 percent, I believe. In Fairfax County, Virginia--I don't know who computes this--the reported unemployment rate is 0.9 percent. I don't know what the NAIRU is in Fairfax, [Laughter] but that is a low unemployment rate. In general in this situation, in contrast to the point you made about wages in your area, Tom, we are seeing fairly widespread indications across the District of at least a moderate acceleration in wage growth, especially in manufacturing. So, I think for the most part we still have strong production and tight labor markets.

At the same time, though, like others we do see concrete evidence now of softer demand in our area than we had seen heretofore. Retail sales overall are still growing, but sales of durable goods, big-ticket items, have moderated noticeably in recent weeks. In asking Dave Stockton earlier about housing activity going forward, I talked about the possibility of stronger sales. But residential construction has been weak and home sales have been weaker in our area as well. That has had a particularly noticeable effect on furniture sales, which is a big industry in our region. And we are seeing some diminution in the output of the major furniture companies in our District. We had a report recently that business at a national furniture trade show--I think this was in Dallas, Bob--was about 20 percent lower than at the same show a year ago. And a former director who runs a fairly good sized furniture manufacturing company in western North Carolina told us that he has laid off all of his temporary workers. Back in the second quarter business was really thriving, but now he has laid off all his temporary workers, is operating some of his plants only four days a week, and is

offering discounts for the first time in a while because his inventories have been moving up so quickly. So, again, I'd say we have a mixed picture in the District.

With respect to the national economy, rather than commenting on the particulars of the Greenbook forecast, which seems reasonable enough to me, let me just offer a general reflection if I may. Clearly, the place to start today in thinking about the implications for monetary policy of recent developments in the economy is the remarkable recent growth in labor productivity and the extent to which that growth has continued to accelerate. People use the word "amazing" a lot, but it is amazing to me. As the Greenbook points out, growth in output per hour in the nonfarm business sector exceeded 5 percent in the four quarters ended in the second quarter. That's the fastest productivity growth since 1983 when we were coming out of the deepest recession in the post-World War II period. It is also especially striking given that the trend growth in productivity in the first part of the 1990s was only 1-1/2 percent.

Nevertheless, in light of the wide range in which productivity growth has moved over the last decade, I think there is still a lot of room for doubt and uncertainty about the persistence of its recent behavior and where the trend will ultimately settle going forward. Moreover, as we've discussed before, productivity growth for monetary policy is a two-edged sword. In the short run faster productivity growth, of course, allows firms to pay higher wages without necessarily raising prices, which is why a lot of people see the recent increase in productivity growth as a reason for us not to tighten policy further. But we know that rising productivity growth also produces a wealth effect. It is most visible in higher equity values. Even more importantly, it is also evident in household expectations of future wage growth. And they are rising. It is the magnitude and timing of this wealth effect that ultimately determines whether the growth of demand over time outpaces the growth of supply. That, of course, is essentially the main focus of our concerns.

For purposes of evaluating our policy options today, we need to know as much as we can about the prospective evolution of productivity growth and its likely impact on wealth and spending over time. That raises a couple of questions about the recent burst in productivity growth that we are all witnessing and marveling at. First, how long will it persist and will it conceivably rise to an even higher rate than we have had to this point? Second, to what extent has the surge already affected household and business spending plans? Have they been affected a lot already or is there perhaps a lot more still to come? In other words, what is the public's recognition lag with respect to changing productivity growth? You alluded to this at least implicitly, David, in your comments about how productivity may affect spending going forward. These questions obviously are very difficult to answer. But as I see it, at least, they are the core questions that we need to be focusing on now in making monetary policy decisions at a time when structural productivity growth is very much in play. I think the staff can help us do this. For example, in the Greenbook conceivably you could present some alternative simulations for trend productivity growth the way you do now for the funds rate and equity values. And you might discuss how different recognition lags could affect the timing of the impact of these productivity changes on spending in the future. But ultimately econometric and statistical analysis, I think, can only take us so far at a time when we are in a situation that is totally unprecedented, at least in the modern history with which I'm familiar.

At the end of the day in this very unique period, I believe this Committee is going to have to make some difficult policy calls the old fashioned way, by sharing relevant anecdotal information around the table. We need to discuss what is happening and what may happen prospectively to productivity growth in particular industries and particular regions and then use this information as best we can to make reasonable judgments about what's going to happen to productivity growth in the aggregate going forward. Obviously, we've been doing this a great deal already. But I think we

may need to focus even more clearly and directly on these kinds of issues than we have to this point.

That's my reflection. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. Sifting through the recent data and anecdotes on the District economy suggests that it remains quite healthy but that some changes are occurring beneath the surface. First of all, employment gains remain substantial. That is not a change. Labor markets are very tight and there is some continued upward pressure on compensation. On the other hand, our contacts say that significant price competition persists. Overall manufacturing activity is strengthening, although some producers are expressing concerns about higher energy bills, and if that persists, I think it is a factor that probably will affect output going forward. It appears that consumer spending and residential construction activity have slowed a bit, but at this point those adjustments appear to be modest in magnitude. In any event, nonresidential construction remains quite strong.

We have made some inquiries recently about productivity and its prospects because some of our business contacts have expressed the view that the large gains--maybe the largest gains in productivity--are now behind us. While some people adhere to that view, I would say that the majority of our business contacts remain quite optimistic about the outlook for productivity and believe that further large gains are in store. So, overall, we are hearing a pretty positive, optimistic story in that regard.

As for the nation, it looks to me as if the U.S. economy is on a favorable course. I think the outlook for real economic growth remains positive. As far as inflation is concerned, our VAR model has no acceleration of inflation over the next four quarters; it has inflation running a bit below 2-1/2 percent at an annual rate. Obviously, there is a lot of uncertainty surrounding that kind of

forecast, but if it's more or less correct, it suggests that we at a minimum have some time before we have to take further steps to address that issue. Thank you.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. First, regarding the Greenbook forecast, the Board's staff is appropriately euphoric about productivity. [Laughter] Second, productivity growth is a good thing and recent productivity growth certainly has not produced a wealth effect through the stock market.

As for our regional economy, growth in the Eleventh District has slackened somewhat over the last few months, but it continues at a healthy and sustainable rate. Labor market tightness, the impact of past interest rate hikes, and a stalled stock market are factors frequently cited for the slower pace. Reduced growth in the interest-sensitive sectors has been partially offset by the recovery of the oil and gas industry, which is still in its early stages. In spite of growth having slowed from its breakneck pace of late 1999 and early 2000, the Texas unemployment rate at 4.1 percent is now at its lowest level since 1974. I might reiterate that in the major metropolitan areas of Texas the unemployment rate is considerably below 4 percent. The rate for the State of Texas is held up primarily by the border counties, but even in those areas the unemployment rates have come down significantly.

The value of construction contracts in Texas has been on a downward trend since early in the year, having fallen 14 percent year-to-date. Residential construction is off slightly but commercial construction is down sharply. We are beginning to see some diverging views on future growth in construction activity. Several developers are very optimistic about future demand growth but they have begun to complain that lenders are "unjustly restraining construction because they fear overbuilding." A quick look at office vacancy rates in an historical context suggests that the real estate developers may have a case. Houston downtown vacancies are at an 18-year low, and in

Austin rents and occupancy rates of 98 percent are at their highest levels on record. The tighter lending standards that banks are reporting in our lending officer surveys seem to be reinforcing the impact of higher interest rates.

Another area of slower activity is retail sales. In addition, continued drought has added to the troubles of farmers and ranchers. High-tech industries, especially semiconductors, have been enjoying steady sales growth internationally since the end of the Asian crisis. Salary increases in the high-tech sector--notably in the Dallas/Fort Worth and Austin areas--are running at a 16 percent annual rate in the second quarter. And recruiters are saying that IT professionals can name their own salaries. With H(1)B visa legislation stalled in Congress, the shortage of IT workers is not expected to end anytime soon. Before we jump to the conclusion that double-digit wage gains translate into price inflation, let's remember that prices of products such as semiconductors, computers, and peripherals have been declining at a 15 to 25 percent rate for years on end.

At the national level, the economy appears to reflect the same factors that are affecting the Eleventh District, except that higher oil and gas prices impact it differently. The more interest-sensitive sectors of the economy have slowed. The slower growth of demand, in tandem with constant competitive pressures, has kept inflationary pressures in check. In fact, outside of the inflation numbers in February and March, there has not been a major inflation breakout this year. Productivity growth has kept pace with compensation gains, yielding a decline in unit labor costs in the last four quarters. Most commodity prices have been contained. Gold has hovered around a low \$270 level and the dollar remains strong. We still hear as many complaints about the lack of pricing power as we do about labor scarcity. I read this as evidence that our monetary policy is appropriate and that we can afford to await evidence to the contrary before feeling compelled to raise rates again.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Mr. Chairman, the reports around the Eighth District are broadly consistent with those already noted for other parts of the country. I would summarize by saying that the pressure is off but there is no sign that the economy is sinking.

One comment on the labor market: My UPS contact indicated that his firm has had no problem in obtaining professionals and that for the first time in several years the issue of entry-level labor has been successfully addressed. I had reported earlier that obtaining the entry-level labor to do package-sorting work had been a terrible problem for UPS. He noted that the turnover for entry-level workers is down to 30 percent as compared with 40 to 45 percent a year ago. So, the retention bonuses and the referral bonuses have done exactly what the firm had hoped they would do. Our contacts at both UPS and FedEx also reported that the international markets that they deal with are booming.

I absolutely agree with the Greenbook outlook that it is more likely that inflation is going to be creeping up than drifting down. And I would like to reemphasize or echo the point that Cathy Minehan made: The reason for separating energy prices from other prices is to try to differentiate a temporary development from something that is longer running. But energy prices have now been going up long enough and are likely to remain at their current level, so that factoring them out of our thinking and just looking at the core CPI instead of paying attention to the total CPI I think is a mistake.

I have a comment on the Greenbook forecasting exercise. I would like to see a forecast--and whether we call it a baseline forecast or not I don't really care--that is built as far as possible on assumptions that are consistent with market forecasts. I think that is the case with oil prices now. The assumption for oil prices is essentially what is in the futures market. I would like to see that basis for assumptions carried through wherever it can be. For exchange rates, that is not the

assumption in the staff projection. We can debate what the long-run course of exchange rates may turn out to be. But to have a forecast for exchange rates over the next year or 18 months that differs with the market forecast is perhaps not the most productive way to assess the outlook because we don't know when these long-run forces will begin to take hold. At any rate, I would like to see a Greenbook forecast that is based on the market forecast for exchange rates. And I would say the same about the forecast for the federal funds rate. There is a substantial divergence now between the federal funds assumption in the Greenbook forecast and the federal funds assumption that is built into market data. And unless we know where that difference is coming from, it seems to me that we may not be getting the most we possibly can out of the market evidence that is in front of us.

I'm uneasy about building the Greenbook forecast on the assumption of accelerating productivity. Productivity has accelerated; the growth rate has been rising. But to project the rise into the future I would say is a risky proposition. It may well be correct, but we know so little about productivity and the underlying economics of productivity determinants that to base a Greenbook forecast on an assumption of accelerating productivity seems to me a rather risky bet. Sorting out what is temporary and what is permanent is a very difficult problem, and for the most part with productivity we are just extracting observations from the recent past. To project ever-increasing productivity could, in my view, mislead us. That is all I want to say at this point.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you, Mr. Chairman. Not surprisingly, in many respects recent developments in our District are very similar to those Mike Moskow reported for his District. I won't cover them in detail because many of my remarks would be a repetition of what he already said. The most commented-on development in the District in the last couple of months has been the slowing in the motor vehicle sector, with the decline in large truck production most pronounced.

Parts suppliers and trucking companies are reporting substantial declines in new orders. Some are saying orders are down 50 percent. So, some workers have already been laid off and, more importantly, additional layoffs are expected. Layoffs have not yet occurred in auto assembly plants, but overtime work for autoworkers has largely disappeared in the District.

Residential construction activity has declined, most noticeably in the low- and moderate-income range. Within the District, building in western Pennsylvania is holding up best--maybe because that region was lagging earlier--whereas contacts from a number of metro areas in Ohio and Kentucky have reported what they consider to be overbuilding. Commercial real estate construction is said to have slowed to a more sustainable pace. Both developers and bankers claim that during the course of the past year a pronounced element of caution and restraint has crept into their previous optimism about new developments and new projects. They claim that the bankers have really tightened conditions by demanding more equity in any new project that is about to get under way. So, the real estate professionals believe that widespread overbuilding has not occurred in the District. Bankers assert that the pipeline of new loans is starting to empty out. And the bankers on our boards of directors say that they are revising downward their projections of earning asset growth for the balance of this year, and their expectation is that it will be soft next year.

With increasing frequency we hear from manufacturing companies located in the District that their optimism about the prospects for exports pretty much balances out their more pessimistic view about domestic demand. As I reflected on some of the comments that we were hearing from these companies, what was noticeably absent--but I didn't think to ask about it at the time--was concern about competitiveness. There was no suggestion or hint that the value of the dollar or exchange rate levels or anything like that was influencing their ability to sell. Their comments

mainly were about how strong these foreign economies are going to be and how much of the market their firms could service.

Reports about retail spending have fluctuated widely in the last couple of months. The only thing that seems clear about the retail sector is that the uniformly strong reports that we were hearing earlier have stopped. The one sector where labor market conditions continue to be very tight or even tighter is health care. Contacts in the health care field say that they are telling employers to expect several years of double-digit increases in the cost of their medical plans. A disturbing trend is that smaller employers report that they are offering young workers the option of higher wages in exchange for forgoing any medical coverage.

At a recent small business advisory council meeting almost all participants said that they expect inflation over the next two years to be somewhat higher than it has been on balance in the past couple of years. Most apparently felt that wage and benefit costs would rise more rapidly, but on other issues their views were somewhat divided. Some suggested that continued productivity gains would keep pace with these higher labor costs. Others suggested that their earnings were going to be under pressure because productivity would not keep up. And they were equally split on whether or not they could be successful in passing along unavoidable cost increases, mainly labor costs, to their customers.

Turning to national and international prospects, I always look forward to the meeting after this one each year because that is when the staff adds another year to the forecast horizon. I don't underestimate at all how difficult that is, but to me two years or so is the right horizon to be thinking about in terms of the current stance of policy or even possible near-term policy actions. I think it is important to get us thinking about what kind of environment we're going to face in the year after next year. It is sobering and humbling to think back to the August meeting two years ago--when the

Russians were in the process of defaulting that very day--and what we went through in the subsequent two years to get to where we are today. We have seen oil prices at \$10 or \$12; we've seen oil prices at \$30-plus. We've seen developments in credit markets and foreign exchange markets that none of us would have been able to forecast, let alone be sure about what the right policy response should have been. So, I think we have to be very open to the idea that there will be a lot of unexpected events. My own view is that these surprises are more likely to be on the international than the domestic front over the next two-year horizon.

Three months ago, when we last raised rates, I would have put Mexico very high up on my list of worries. Now, three months later--and maybe I'm just being totally naïve--the situation there seems to have changed dramatically for the better and I would put it well down on my list of worries. But I could be wrong. We may get through the inauguration of their new president and a transition and find out that something was there that we couldn't see. But when I look around elsewhere for things to worry about that may be different in ways that I could not possibly imagine, I think the domestic fiscal side is going to be different. And the report I read last night about how to think about U.S. fiscal policy alternatives did not comfort me. I believe the fiscal stance we have had recently of increasing government savings has been stimulative to at least one sector of the United State's economy, the investment sector. I find it difficult to think about increased spending, reduced tax revenues, and smaller surpluses or even deficits as being stimulative in an overall sense. It may be toward certain parts of the economy, but I can't think of it as being stimulative to the business investment sector. So, over the coming two-year horizon it seems to me that we have to be willing to think about fiscal impulses more flexibly than what was suggested in the material I was reading last night.

When I look at the issue that was raised earlier about Japan and the concern there, we know that something is going to happen in the next 2 to 2-1/2 years. I don't know what baseline assumption we should make, but something is going to happen. Politically it is already starting. How fast it will go is anybody's guess. Anybody's is better than mine! We know that developments in Europe are going to be quite different than they have been in the past. The launch of the euro in currency form a year from December will be a very significant landmark development if it happens, or even if it doesn't. And to get from here to there what has to be done in Germany, Belgium, Italy--in a lot of these countries--could be socially and politically very, very divisive and difficult. As I said, I don't know what the right assumption is to make. But I think it would be useful to the Committee in our October meeting, when we look out through the end of 2002, for the staff to consider a wide array of possible events and assign some probabilities to them, and see where we come out on them. We ought to be prepared to be flexible and humble about our ability to forecast what is going to happen over the next two years.

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. Thank you, Mr. Chairman. In the Philadelphia District business conditions have been mixed recently, with improvements in some sectors and slowing in others. In many respects District developments are similar to what we have heard around the table this morning but with some interesting differences.

The pace of manufacturing activity has picked up after a two-month pause. On the other hand, recreation and tourism has remained strong as summer spending has hit the region. Certainly the hotels in the region got a boost from the political convention, filling them to capacity. But in fact the evidence is broader than that about a good season for our recreational areas. Growth in retail sales in the region has flattened out this summer, although discount stores and specialty stores did

better than department stores. And most auto dealers in the region indicated that sales have slowed this month. On the construction side, residential, commercial, and public construction activity, although still strong, has been somewhat reduced in strength over the last several months. The number of new construction projects coming into the pipeline is beginning to decline. And industry contacts report that while vacancy rates are low and real estate prices and rents are rising, there has been a lot of caution, particularly in our urban centers, again noting Philadelphia in that mix.

Bank lending continues to rise moderately, but with some slowing on the consumer side, including residential lending and non-credit-card consumer spending in general. Business lending continues to be strong, however. Labor markets remain tight, with our region's unemployment rate slightly below the nation's in the most recent months, and that is unusual. But reports of outsized increases in wages and signing bonuses seem to have become less widespread than earlier this year. More retailers in Philadelphia and in Pennsylvania more generally are reporting that they are seeing increased costs and are passing them on in the retail network. That's not true, however, on the manufacturing side. Our business outlook survey in August still shows a very high index for prices paid by manufacturers, but the survey indicates that the index of prices received by manufacturers declined this month to its lowest level for the year. The manufacturers are still having difficulty passing on input costs to final customer prices. Businesses and banks generally expect moderate growth for the remainder of the year.

Turning to the nation, we too see mixed signals in the recent national economic data. On balance these data suggest to us a moderation in the pace of final demand that is moving the economy toward a more sustainable growth path. Even though the economy remains strong and the labor market remains tight, recent consumer and producer price measures indicate that inflationary pressures are not as strong as they were in the first quarter. I also note with interest the Greenbook's

latest upward revisions in the trend growth of productivity and potential GDP. I do think that the outlook for core inflation is not as worrisome as it looked several months ago when I was first deciding on this position. I also am encouraged by the fact that longer-term expected inflation has been quite stable, as indicated in the release of our Federal Reserve Bank survey of professional forecasters and the Michigan survey. The stability of these measures of long-term expected inflation suggests that people believe that the FOMC will keep inflation under control and leads me to conclude that the Fed is not behind the curve in this regard.

In sum, signs of slower growth are encouraging, especially since we have not yet seen the full effect of the increases in the fed funds rate and the discount rate that have already been put in place over the last year. Thank you.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Thank you, Mr. Chairman. Recent indicators suggest that economic growth in the Second District has slowed since the last report. Price pressures persist but have yet to show up in any broad-based measure of consumer prices. Unemployment rates in the District were mixed in July, rising from 3.4 percent to 3.7 percent in our part of New Jersey, but falling from 4.5 percent to 4.2 percent in the State of New York. Total payroll employment was pulled down by declines in the public sector, reflecting both a winding down of the 2000 Census and a substantial drop-off in summer jobs programs throughout the state.

In the private sector, job growth has moderated a bit in recent months. In July private sector employment grew at a 1.1 percent annual pace; that is down from 1.8 percent in the second quarter and 2.1 percent in the first quarter. Most retailers indicate that overall sales continue to run somewhat below plans since the last report. Our contacts report that an unseasonably cool summer-- actually we didn't have to talk to our contacts to find that out [laughter]--has held down sales of

summer wear and air conditioners, leading to some buildup of inventories and very steep markdowns.

The District's real estate markets have been mixed, with signs of slowing in the residential sector. But in the commercial sector New York City's shortage of office space shows no signs of abating, with rents continuing to spiral upward. Midtown Manhattan's office availability rate was little changed at an extraordinarily low 3.4 percent at the end of July; downtown's rate was steady at 5-1/2 percent. Both of those figures are less than half of what they were just a year ago. Not surprisingly the surge in asking rents has been stunning. They have been rising at an annual rate of nearly 50 percent over the past three months and are roughly 30 percent higher than at this time last year. Most of the leasing activity is reported to be coming from the high-tech, financial, and telecommunications sectors. In residential housing, there is a definite slowdown around the District in general. In upscale Manhattan, that is mainly reflected in the fact that bidding wars are less frequent and upscale apartments stay on the market for as long as three weeks instead of about three minutes as was the case about six months ago.

The regional purchasing managers' survey suggests continued improvement in business conditions in July and some moderation in price pressures. The consumer price index for metropolitan New York City rose 3.1 percent over the 12 months ended in July, which is slightly higher than at the end of June when it was up 2.9 percent. The rise mainly reflects a sharp increase in energy prices. Electricity costs in New York City and the lower Hudson Valley surged in July, with the average customer's bill up 43 percent from a year earlier. Given that July of 1999 was, I believe, one of the hottest on records and July of this year one of the coolest, one can imagine how large the increase was per BTU. Loan demand in the District is slacking off somewhat. So, in general there is a feel that the economy in the District is still pretty robust but slowing somewhat.

On the national level, recent data indicate that growth of consumer spending has moderated, while housing starts and sales are declining. For the second half of 2000 we expect growth to average about 4 percent, down from 5 percent in the first half. We continue to expect some further slowing of growth in 2001 to around 3-1/2 percent, largely because we think there is a fair amount of monetary policy tightening still in the pipeline. The continued acceleration in productivity growth has led us to adjust upward once again our estimate of the economy's potential. We now have it at 4-1/2 percent. With growth substantially below potential over the forecast horizon, we expect the unemployment rate to begin rising later this year, eventually reaching about 4-1/2 percent by the end of 2001. That has led to a significant scaling back of the projected rise of core inflation in our forecast. We now have it at 2.6 percent Q4-Q4 for 2001, down a full 1/2 percentage point from our forecast in June. Although growth appears to be moderating and the continued acceleration of productivity has damped inflation projections, we think the balance of risks continues to be in the direction of concern about inflation. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. At our last meeting we decided to wait and see whether the 175 basis points of tightening that we had put in place was having the desired effect on the economy. I believe the incoming data, as others have suggested, are generally supportive of the wisdom of that posture and do suggest some slowing is in train. Clearly, the interest-sensitive sectors have shown some noticeable slowing. More broadly, it seems as though the job market has gone from super hot to what I would describe as sort of warm. The pace of job growth seems to have slowed from about 240,000 per month during the first four months of the year to an average of about 125,000 during the more recent four months. And finally, the data suggest

that businesses are boosting inventories, which might be an indication that perhaps demand is not topping supply.

If one takes a longer perspective, I am fairly comfortable, as others also have indicated, with the change that the staff has introduced with respect to productivity growth. I come to that view for a number of different reasons. First, output of and investment in information communication technologies continue to be the most robust portions of GDP growth. Secondly, I too have had some conversations with people from Silicon Valley who have worked very hard to convince me that more is still to come on the productivity front, as a few of the presidents have mentioned. Obviously we will have to wait to see if that is the case. Thirdly, venture capital funds still seem to be flowing into these newer areas, suggesting that the investment community is also noticing that something special is going on there and they continue to be supportive of it.

The staff has worked fairly hard to inform us of the risks surrounding this assumption, and I think at least one other person has mentioned that. But, like the staff, I also note that the equity markets have been rising gradually in the recent past as opposed to at a torrid pace, and so perhaps the wealth effect is not feeding demand as strongly as it had been before.

Finally, looking to market data, based on the 10-year TIPS it seems as though expectations in the market with respect to inflation are relatively subdued, and I think that is also good news. Having said that, I agree with others that the risks still continue to be mainly on the up side, and I'd cite two or three reasons for that. First, obviously, consumers are confident and labor markets continue to be tight by historical standards. Secondly, in that context, I do note that some analysts think the recent slowdown in private employment growth might be attributable not to an easing in labor demand but rather to a tightening of labor supply constraints. They support that contention by the fact that much of the slowdown in growth has come not from interest-sensitive

goods-producing sectors but rather from the services sector. But when one looks behind that, one sees that where the growth has been slow is in the services sector and in FIRE, which obviously includes real estate, and also in the personnel supply sectors. So, that strikes me as a bit mixed. I might also say in this vein that the ECI obviously should have given us some pause, but I think the staff is right in suggesting that perhaps some of that is simply a reflection that this increase in productivity is being shared with labor as well as with capital.

A more serious concern with respect to the inflation outlook, it seems to me, is that financial conditions have in fact eased a little since our last meeting. Real interest rates fell over the intermeeting period, and indeed real interest rates for investment-grade borrowers appear to be up only about 1 percentage point since May 1999. So, in some sense our credibility, if you will, is leading perhaps to a bit of leakage in our efforts with respect to tightening. However, my concern about accommodative financial conditions is tempered a bit by the fact that net borrowings from nonfinancial businesses appear to have slowed in July from the rapid pace of the second quarter. Also, at least compared to June, the composition of that borrowing has shifted back to banks, and banks are reporting a tightening of standards and a firming of terms on business loans. And, as a few of you have indicated, it may well be that the demand for loans is skewing back.

Finally, I think we should note that there has been in this meeting and certainly in others some discussion of the NAIRU. And on that topic I'd like to share an observation from a well-informed citizen about what she described as the "Nehru." This was in fact my wife. She wants to know why this Committee continues to focus so much on the style of a man's jacket that was only popular for a few years in the 1960s. [Laughter] I said to her that some economic questions really can not be answered! But in a more serious vein, it does suggest that those who want to couch their

analysis in the terms of the NAIRU clearly have an extra strong burden of communication. Thank you very much.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. Usually at these meetings we are appropriately forward-looking, but today I would like to try something different. I want to look back into the past to see if we can learn anything, and in my comments I am going to refer to a table that is being passed around.<sup>2</sup>

The great American inflation started in mid-to-late 1966. While policymakers and analysts did not have a core PCE index at the time, we can construct one in hindsight. It shows that the core PCE was quite stable until the first part of 1966 before beginning a stair-step upward pattern where it rose for a while, stabilized, and rose more before the climb eventually ended in double-digit levels. Other indicators of inflation that were then available followed a roughly similar pattern.

We know from Orphanides' work that both policymakers and analysts generally felt that the unemployment rate target--in deference to Governor Ferguson's wife, this was before the NAIRU concept was invented--was around 4 percent. Basically, policymakers felt the NAIRU was 4 percent; it turned out to be a lot higher, and policy proved to be excessively expansionary. One could make a superficial comparison to today. Today the FOMC is behaving as if NAIRU is around 4 percent despite warnings that it is higher from the Greenbook, from some private economists, and indeed from some members of this Committee. The question then becomes whether the FOMC might now be making the same mistake that it made back in the 1960s. I for one have consistently had private guilt feelings that we could be. Hence I want to look backwards and see what the evidence says.

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<sup>2</sup> A copy of the table used by Mr. Gramlich is appended to this transcript. (Appendix 2)

The table that you should have by now gives some numbers that compare the change in various key inflation indicators between early 1965 and late 1966 in the first column and between Q2 1999 and Q2 2000 in the second column. In making this comparison I do not mean to criticize the FOMC of the 1960s. We have several important advantages today: We have better diagnostic data, we have fiscal policy working to fight inflation, and we don't have presidential criticism of interest rate increases. I make this comparison simply to examine similarities and differences from the earlier period when we know that inflation took off.

The table suggests the following: In the earlier period the core PCE, which as I said has been reconstructed from hindsight, went up by about a point in about a year's time. Now it has risen by just one-third of that. We have discussed the reasons for the recent rise, and at least at this point I think there is agreement that relatively little of this rise reflects true acceleration. Unit labor costs rose sharply in the earlier period largely because of a sharp rise in wages. Productivity actually went up slightly at that time. In the recent period, we know that unit labor costs have been dropping, with a slight rise in wages more than offset by a sharp rise in productivity. In the Michigan survey 1-year inflation expectations rose by two points in the earlier period and by one-fifth of that now. But even these 1-year expectations could be misleading for the recent period because long-term 10-year inflation expectations have been very stable, a series that was not available back then. Nominal 10-year Treasury rates rose by 8 basis points then and 20 basis points now. But a more meaningful measure is the spread between nominal and real 10-year yields, up just 10 basis points in the recent period. Again this nominal-real spread could not be measured back in the mid-1960s. This backward look shows that in many respects the earlier period looked just as one would expect in a world where inflation was gradually increasing.

In each of these respects, the recent period looks very different. The FOMC may be making a mistake now. We obviously can't yet claim the contrary, but the risk that inflation is accelerating seems far less now than it did back in 1966. My policy advice follows from this analysis. Our earlier rate increases, along with other factors, seem to have slowed the growth of aggregate demand to roughly acceptable levels. Whether we should be tightening further depends on whether we think the unemployment rate is below NAIRU or that product and goods markets are too tight. Markets clearly seem to have been too tight in the mid-1960s. If we should see evidence indicating that situation now, in anything like the form that existed during the mid-1960s, I'd be the first in line to argue for tightening policy. But at this point I feel the evidence is simply not there. For now, as at the last meeting, I'm comfortable just watching the situation until we see more evidence that inflation is accelerating. Thank you.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Thank you, Mr. Chairman. I'm going to focus my remarks this morning entirely on productivity, specifically on the implications for the outlook of the apparent further acceleration in structural productivity growth. If I had a title, I think it would be "In Celebration of Accelerating Productivity." I'm going to use a handout a little later in my remarks--or at least the first two pages of my handout--but please, no peeking yet! <sup>3</sup>

As it turns out, I'm going to respond directly to Governor Ferguson who said that those of us who characterize our views of the economic outlook and challenges for monetary policy in terms of NAIRU have a very heavy burden in terms of communication. I think he's absolutely correct. And I rise to the challenge! [Laughter] To me the most important developments since our last meeting were the revisions to the path of productivity over the last several quarters and the higher-

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<sup>3</sup> A copy of the material used by Mr. Meyer is appended to this transcript. (Appendix 3)

than-expected value of productivity in the second quarter. Likewise, the most important parts of the revisions to the Greenbook forecast for me related to productivity. They were the upward revision to the assumption about structural productivity growth and the interesting decision to build into the forecast a further acceleration in structural productivity, as implied by the capital deepening path associated with the staff forecast.

Now, I think President Poole made a very worthwhile point about the need for caution in extrapolating productivity acceleration going forward. But I rather like what the staff did in this case because it made their forecast more internally consistent. They have a path of capital spending; they have an assumption about capital deepening. And what they really did was to endogenize their projection of productivity to keep it consistent with the capital deepening going on in the model. Still, as others have pointed out, it probably would be useful to have alternative scenarios with different productivity paths since this is so very important to the outlook.

Let me now turn to an interpretation of the Greenbook forecast. What is happening in this forecast is that the staff has revised upward the path of both actual and potential GDP growth by about the same amount, preserving almost the same unemployment path as it had last time. But inflation is lower as a result of the impact of a further acceleration in productivity on inflation, an effect I want us to focus on in a minute. The picture is clearly bright. We have higher growth and lower inflation than in the previous forecast. But what is also important is that the Greenbook has preserved the qualitative story of the last Greenbook and previous Greenbooks, and that is that the unemployment rate is still below the staff's estimate of what I'm going to refer to as the short-run or effective NAIRU. And as a result, there is upward pressure on inflation due to tight labor markets, though less so than would otherwise be the case because of the acceleration of productivity. Indeed, over the next year and a half, the dissipation of the secondary effects of energy costs on core

inflation just offsets the upward pressure that demand is exerting on it, leaving the core rate about unchanged. But thereafter core inflation would begin to rise in a longer-run forecast. We would see that, for example, in the five-year and longer kinds of projections like those we had in the Bluebook at the meeting last time. And over the still longer run, as the short-run NAIRU converges to the long-run NAIRU, there could still be more rapid increases in inflation unless and until supply and demand were rebalanced.

I think the keys to understanding the role of productivity in the forecast have to do with two fundamental issues. One is the effect of productivity on aggregate demand as well as aggregate supply. We know that the staff has argued, I think persuasively, that over the last four years the increase in productivity has actually increased demand by more than supply, resulting in the decline in the unemployment rate that we've seen. They make a break from that approach in this forecast by moving to balanced increases in demand and potential supply. That, I think, is supported by the more modest tone of the economic indicators and by the relatively subdued path of equity prices recently. But we have an important element here of upside risk because we certainly could get a repetition of the pattern we have had over the last four years, in that each acceleration of productivity actually brought with it even sharper increases in demand.

The second effect is the one I particularly want to focus on, and that is the temporary disinflationary impetus that comes whenever we have an acceleration in productivity. Now, we are only beginning to learn about the complex dynamics associated with an increase in productivity growth. First of all, there is not even widespread consensus about the framework that I'm going to be using here, though it is implicit in the staff forecast as well. But we really don't have a lot of historical data from which to learn about the impact of adjusting to big increases in productivity. We had the big decline in productivity in the 1970s and we have this recent experience with acceleration

in productivity, and that's it. We have very few data points. So, there's a lot of uncertainty about how it all works out.

What I want to focus on, then, is the power and persistence of the temporary disinflationary effect associated with the acceleration in structural productivity. Let's look at that first term on the first page of the handout. What I identify there is the effect on inflation of an acceleration of productivity as being related to this term: the difference between  $q$ , which is the actual trend productivity now--for example, 3-1/2 percent in the staff forecast--and  $q^*$ , which is a moving average of trend productivity. The key in this analysis is that wages respond more slowly to increases in trend productivity than prices, and this gap reflects that difference. The  $q^*$  is a moving average of that trend in productivity, which reflects the slower impact on wages. As a result of this asymmetric response of wages and prices, an acceleration of productivity temporarily lowers inflation. And that exact term shows up in the price specification of the Phillips curve if there is an asymmetric response of wages and prices to inflation. Just to give you an idea of how powerful this might be, take a look at the second page where I plotted out that term--the difference between trend productivity and a moving average of trend productivity. I based the estimate of the moving average on a 40-quarter moving average. I picked that particular length because that's the specification the staff uses in solving their wage equations and they found that that works relatively well. What we see here is that because we have such a long lag length, the increases in productivity that we've seen cumulate; they don't dissipate. They are still cumulating and getting to the highest impact we've seen. This term is now 1-1/2 percentage points; that says that the acceleration of productivity is now responsible for about a 1-1/2 percentage lower inflation rate than we otherwise would have had.

You don't have to turn to the mathematical derivations on the third page unless you are a glutton for punishment, but the estimation is all worked out there in gory detail. But I think it

probably overstates the disinflationary impact for a couple of reasons. One, there is a good reason to believe, or I think it is plausible, that part of this acceleration of productivity would be absorbed by firms through a higher profit share during this period. So, not all of this acceleration is passed on in the form of lower prices. Secondly, it's very hard to estimate the lag here. Some equations, in particular those in the FRBUS model, have a shorter lag. To approximate this effect in that model would involve a lag of about 3 years as opposed to 10 years. And if that were the case, it would cut this disinflationary effect by about two-thirds. It would only be about  $\frac{1}{2}$  percentage point.

So, it seems to me that this framework helps to explain why an acceleration in productivity temporarily lowers inflation for a given unemployment rate while preserving the role of balance between supply and demand in labor markets as an important force in inflation dynamics-- indeed, the importance of the long-run NAIRU once  $q^*$  converges back to  $q$ . What it suggests to me is that this further acceleration in productivity is definitely a powerful force holding down inflation relative to what it otherwise would be. I think the staff forecast of about-stable core inflation through next year and an upward creep after that makes a lot of sense. And it suggests that we might have somewhat more time in terms of dealing with the day of reckoning. But we have to be mindful that the unemployment rate might still be below the short-run NAIRU here and that ultimately these demand pressures will become more meaningful should we get a convergence of the short-run NAIRU back to the long-run NAIRU once productivity growth stabilizes.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. Thank you, Mr. Chairman. I apologize that I have no handout, [laughter] but I'll try to make up for it by being brief. The incoming data that we've been reviewing all morning really need no repetition and I would only add that on balance they seem benign and favorable to a truly remarkable degree. It may be a midsummer night's dream but I think the recent

data could contain the seeds of a near-utopian extension of our recent superb era. If a modest downturn does set in for an extended period, productivity improvements could continue to hold unit labor costs flat. And if we have the good fortune to avoid the potential negative shocks from both known and unforeseen sources, the stage would be set: We would experience sustainable growth, higher real incomes, slower but continuing job creation, and steady, perhaps at some point receding, inflation. The only other thing one could ask for is major league baseball in Washington!

[Laughter]

That is an enticing but quite plausible prospect to be sure, but it would be folly to adopt it as a locked-in scenario and I would not suggest that we do so. The real world is still a difficult and challenging place. Inflation is creeping up, the current account deficit does continue to grow, the stock market and consumer debt are dangerously high, and household savings are dangerously low. Hot spots, both economic and political, do glow threateningly around the world. And the favorable outcome relies almost entirely on a continuation of productivity increases unprecedented in recent decades. If all this were not so serious and important, and if this Committee were not so squarely in the middle of the vortex, it would all be great theatre. At any rate, to wait and to watch intensively seems the best posture for today.

CHAIRMAN GREENSPAN. Thank you. Shall we adjourn for coffee, which I think we've all earned?

[Coffee break]

CHAIRMAN GREENSPAN. Mr. Kohn.

MR. KOHN. Thank you, Mr. Chairman. As many of you have remarked, incoming data since your last meeting have tended to reinforce the sense that the growth rates of final demand and the economy's ability to meet that demand are much more closely aligned and are likely to stay that way, at least for a while. On the demand side, consumption is growing at a slower pace and

homebuilding is declining, even before the full effects have been felt of earlier tightening in financial conditions, including the leveling out of broad measures of equity prices this year. On the supply side of the economy, a higher estimated growth rate of potential means that demand need not decelerate as much to achieve that alignment. From this evidence, it would appear that the cumulative effects of your prior actions may well have tightened financial conditions enough to keep the unemployment rate from falling further, even taking account of the partial erosion of restraint from the recent rally in domestic financial markets.

At the same time, the new information on prices and costs, on balance, has not indicated any further intensification of underlying inflation pressures. While these data may make you a little more comfortable with the determination that unemployment rates near 4 percent can persist for a while longer without serious adverse consequences, they have not helped greatly in knowing whether such rates are sustainable over the longer run. Labor compensation has run to the strong side of expectations, but so too has productivity, so that faster increases in real compensation have not put added pressure on unit costs and prices. Price data have tended to confirm that core inflation rates are a little higher than a year ago, though by less than anticipated by the staff, at least in the case of the PCE chain price index. Moreover, the pickup in core inflation is small enough to leave ambiguous the judgment as to whether it is attributable to the indirect effects of energy price increases or labor market disequilibrium. And long-run inflation expectations continue to be stable, or, on market-based measures, have even declined a bit. With inflation and inflation expectations not worsening, and growth in demand near that of potential supply, the Committee might see little potential cost to keeping policy unchanged at this meeting. And waiting would yield benefits, as new information accrued to help assess the underlying forces, especially those working on the course of prices.

Such a decision would still leave open the question of the risks going forward to be characterized in your press release. Most market commentators expect you to stay with the bias toward inflation risks. But that may be partly because they are assuming you would want to avoid the attention and market reaction that a shift might bring. The flat yield curve and pattern of futures rates imply that the buyers and sellers of securities see at least as much chance that your next policy action will be an easing in rates as a tightening. With inflation compensation in the real-nominal Treasury yield spread below current increases in the CPI--even below those in core CPI prices--investors would not seem to be anticipating that keeping policy on hold would pose an inflation risk. And, high levels of equity prices and expected earnings growth and a low implied equity premium would suggest that investors do not anticipate that a much softer economy and appreciable rise in the unemployment rate will be necessary to achieve that outcome.

If the Committee, like the markets, saw the recent data as supporting judgments that the current unemployment rate might well be sustainable--and was now likely to persist without further policy tightening--it might want to consider shifting to a statement indicating that the risks to satisfactory economic performance were now balanced. The staff forecast suggests economic expansion is likely to proceed a bit below the now-higher growth of the economy's potential for some time even with the federal funds rate at its present level over the rest of the year. And the Committee might see the recent information on labor costs as consistent with little pressure on inflation "in the foreseeable future," especially if energy prices retrace a portion of their runup and the dollar remains strong as investments in the United States retain their attractiveness in an environment of strengthening productivity. But you may also want to consider that a statement that the risks were balanced would certainly surprise the commentators and likely boost prices in capital markets, at least a little. Although no policy firmings are built into those prices, a statement of balanced risks still would be taken as reducing the probability of further increases in interest rates.

With demand still quite strong in a number of sectors, the Committee might not want to take the chance that its announcement would further fuel the recent runup in stock and bond prices. Moreover, there are a number of reasons to believe that the risks going forward still point toward higher inflation. In the staff forecast, of course, taken as a whole, they do. Inflation picks up a little next year in that forecast by some measures; and even with an additional 75 basis points of tightening, conditions at the end of the period point to still further acceleration of prices. Even if the Committee did not agree with the staff assessment that unemployment rates needed to rise appreciably, its actions this year to slow the growth of demand indicate that it sees unemployment rates in the low 4s as near the lower end of possible equilibrium levels, and the risks of rising inflation as especially unbalanced at the prevailing degree of labor resource utilization. In addition, the current rate of core consumer inflation may now be closer to the upper end of what the Committee considers to be compatible with its price stability objective. In that case, the Committee might be inclined to consider the cost of any further increase to be particularly high. To be sure, the standard balance of risks statement addresses the direction of future inflation, not its level. But a higher level might suggest more weight on any possibility of further increases, even if such a possibility were relatively small.

As Dave Stockton explained, in the staff forecast the trajectory of price acceleration has been marked down, largely based on a reassessment of productivity growth. However, the nature of the change may imply that the risks to inflation around this revision are not symmetric. On the supply side, the further pickup in productivity damps price increases through the forecast period by offsetting much of the effects on business costs of worker efforts to catch up to previous productivity increases and pressures from tight labor markets. On

the demand side, though, households and businesses are assumed to have already built the productivity acceleration into expected growth of earnings and income. As a consequence, they have also incorporated the associated rise in the equilibrium real interest rate into bond yields, and the Federal Reserve has validated that increase with its monetary policy. Hence, in the forecast the feedthrough of higher potential output to demand is less than it otherwise would have been. The drop in real interest rates and relatively small size of the rebound in equity prices since mid-May supports the notion that it is the economists, not the markets, that are getting positive surprises on productivity. Of late, earnings warnings from firms have contributed to lower profit projections by analysts for the balance of this year and 2001, though to be sure, their long-term forecasts continue to edge higher.

Thus, the new staff assessment embodies two risks that both point in the direction of the possibility of higher inflation than in the forecast. First, if additional productivity growth gains are not forthcoming, cost pressures from the catch-up in real wages and tight labor markets would raise costs faster and squeeze profits. Second, if not all of the higher productivity growth rate is currently built into market interest rates and earnings expectations, then more increases in equity prices may be in store, working to strengthen demand and tighten labor markets. There are other upside risks as well, even apart from the level of the NAIRU and the effects of productivity gains. For example, a stubbornly high price of oil could begin to affect inflation expectations.

The new press statement language is about longer-term risks to meeting the FOMC's objectives. The former language involving asymmetries concerned the probabilities of near-term action--over the intermeeting period and at the next meeting or so. Even if the Committee were of the view that it was unlikely to get enough new information about inflation prospects to justify a policy action in the next few months, it should still adopt the biased statement language if it believes that over time rising inflation poses a greater peril to economic performance than weakness in economic activity.

CHAIRMAN GREENSPAN. Questions for Don?

MR. JORDAN. A couple of questions, if I might. I read in the Bluebook someplace, though I can't find it now--and I thought I heard you say it again in your briefing--a reference to the declines in real rates as reflecting a reduced probability of the Fed tightening and raising the funds rate. So, I look at the data and I say: Okay, 10-year yields have come down and other yields have too, but 3-month rates went up. Well, the fed funds rate is a one-day rate. So I ask myself: Can I

square those? If we attribute to the market an expectation that whatever inflationary impulse is in the pipeline is very short term but not longer term, is that how we reconcile those?

MR. KOHN. The 3-month rates that went up were 3-month Treasury bill rates. Three-month commercial paper and CD rates went down. And I think the Treasury bill market, with a reduced supply, is subject these days to very idiosyncratic changes. Much of the specific reaction relates to likely or possible changes in supply, as liquidity has been impaired. And in fact this increase reverses a decrease that was difficult to understand and explain over the previous intermeeting period. So I wouldn't put any weight on a change in the 3-month Treasury bill rate given the state of that market right now. I think every other interest rate that we look at, private interest rates and even longer-term government interest rates, suggests that expectations about Fed tightening have certainly come down, and that is probably partly some decline in real rates and partly some reduction in inflation expectations.

MR. JORDAN. Okay. That leads me to another question. Some of your remarks about the markets and what we can read into the markets and maybe learn from them, I interpret as saying that there is increasing credibility in the marketplace attached to our commitment to avoiding a sustained acceleration of inflation. A year or more ago, before our first rate increase in this series at midyear last year, we heard a lot of commentary to the effect that inflation can no longer be a problem because of the new economy--that the silicon chip prevents inflation. And that went along with stories about the success of IPOs and equity prices and price/earnings ratios and so on. Now it seems that if people are comfortable that inflation is not a problem, it is because the Fed is on the job. To me there does seem to be, compared to a year ago, a big swing as to the reason given for why inflation is not a problem. If that's right and if that is built into what we're seeing in the markets' financial indicators, then what weight would you give to increased credibility of the FOMC? The

reason I'm asking is because there is this phenomenon, at least theoretically, of the Friedman surge effect or the Parker's paradox effect--that with an increase in credibility of the commitment to fight inflation, the demand to hold money balances relative to wealth or permanent income would be higher. So the same money growth would be less expansionary than compared to a lower credibility environment. And if there has been a shift over the last year toward more credibility attached to our commitment to resist inflation, what weight would you give that in assessing the thrust of policy actions?

MR. KOHN. I think the markets are looking at both their assessment of the underlying supply and demand for goods and services and the Fed's reaction. I personally don't sense a sea change in our credibility. I think our credibility has been building gradually for the last 20 years, sometimes faster, sometimes slower. Over repeated episodes of the Committee keeping its eye on the longer-run price stability goal and acting successfully and preemptively to achieve that, we have built credibility. I would think that some more credibility has accrued to the Committee over the last year because of its actions. But I also believe that the markets don't see the underlying inflation risk. If there were increased credibility but they saw an inflation risk or a strong growth risk, they might assume that inflation would be low but that the Committee would be tightening interest rates a lot in order to achieve that low inflation. But in fact they don't have a tightening of interest rates--real interest rates--built in at all. So it's not just that they see inflation low; they see it low without any FOMC action. Drawing on the recent experience of the last several years in which there hasn't been any rise in inflation at very low unemployment rates, and where productivity growth has continued to hold down costs, they've basically projected a continuation of that experience out ahead. They don't see a need to tighten policy. So I don't think it's just credibility. Between the Greenbook and the markets--in fact, between many economists and the markets--the underlying analysis is different. The

markets are putting a lot of weight on their experience of the last few years, whereas the economists are trying to sort through the shocks that might have produced that experience and are seeing some risks that the markets don't see.

CHAIRMAN GREENSPAN. Further questions for Don? If not, let me get started. I think there is a fairly general consensus that we are observing a marked slowdown in the growth of consumer demand after a very strong performance earlier this year. Motor vehicle sales clearly are down, although the data for August, seasonally adjusted, were little changed from the July numbers. Chain store sales have been quite weak recently, and the data that came out this morning show significant weakness in mid-August. And in general we are seeing significant softness in all the housing-related consumer goods markets.

One of the elements in our models on which we have very considerable difficulty getting a good fix is the inventories of consumer goods held by households. Because those inventories tend to behave very much like the inventories of steel, aluminum, and textiles in individual business establishments, we would expect retail demand to soften in the event of a backup in inventories of household goods. But, there just is no evidence of any satiation of consumer demand, especially taking account of the fact that we as consumers spend an increasing proportion of our money on impalpable services. Clearly, we can clog up our closets with clothes and our driveways with motor vehicles, and our stock of appliances can simply get out of hand, which I can assure you is my current situation. [Laughter] Nonetheless, I find new things on which to spend money all the time. Even so, it remains true that to the extent we are still dealing to a significant degree with a goods-related economy, the excess inventories in households are an important factor that is sometimes overlooked when we evaluate the economic outlook.

To be sure, our model does have an inventory adjustment process, and indeed we are seeing that the stock of consumer goods--mainly, of course, durable goods--has been rising at a faster pace per capita or per household than in the past. While that is not to say that consumer demand has reached a point of saturation, history does suggest the existence of a cyclical adjustment process as inventories go up. And as they go up at an excessively rapid pace, as they indeed have been doing for the last number of years, there is a tendency for the rate of accumulation to slow. When that slowdown occurs, it works its way back into the type of environment we currently are observing in the consumer area. Clearly, the wealth effect is interrelated with this process.

It is difficult to judge the extent to which the sharp rise in energy prices has effectively removed purchasing power from the marketplace. What we see at the end of the day is a softened consumer sector whose growth rate is well below what it was earlier, but growth continues nonetheless. There is no evidence of which I am aware that suggests the consumer is pulling back to an extent that is potentially destabilizing for the economic outlook. As consumer and indeed housing expenditures soften, there is a feedback into the intermediate products industries and the slowing reported by an increasing number of such industries, which Mike Moskow mentioned earlier today, is generally what one would expect under those conditions.

In complete contrast to developments in the consumer and housing sectors is what is going on in the capital goods markets. Here what we are observing, as we have discussed on many occasions previously, is a continuing increase in prospective rates of return on new capital equipment, especially high-tech. There really is no low-tech equipment anymore. There is no old-fashioned type of capital equipment worth its name. As a consequence we are beginning to see a spillover from the SIC classifications, which is how we often designate high technology. In any event, overall capital investment continues to boom, an indication obviously that the expected rates of return, which had

previously been presumed to be on the rise, actually have materialized. We can see that in two ways. One is that plant managers are continuously ordering an ever-increasing menu of these types of equipment, which means they are seeing that it works. We obviously are seeing the same phenomenon in the productivity data, which effectively are one way to envisage the real return on capital. And indeed we are seeing it in still increasing long-term earnings forecasts by security analysts. As I have mentioned before, the latter may not be very knowledgeable about what is going on in the business world, but they are reasonably good reporters of what the companies that they follow are saying about their longer-term outlooks. That invariably means that productivity in the individual companies is showing continued and irreversible increases. At some point, perhaps not that far down the road, that is going to change. Indeed, it invariably must change because the history of these types of technological surges or shifts in technology S-curves shows that they lose momentum after a point. For example, once the availability and use of electricity became pervasive throughout the economy, its rate of growth slowed quite appreciably. In fact, it slowed to such an extent that new generating plants were not built as needed, and we can observe the problems that have resulted from that.

At the moment, however, what we see is a quite extraordinary surge in capital investment whose direct impact on productivity involves a fairly straightforward relationship with a lag. The analytical problem that exists when we have this type of productivity-driven economy is that it is by no means clear whether the increased capital investment will create a larger expansion of demand than potential supply.

There are two elements here. One is the time lag that exists between capital expenditures and the completion of facilities and their operation at full potential. The other is the coefficient that relates increases in capital stock to increases in capacity. As Larry Meyer pointed out, the evidence

to date suggests that the overall impact of accelerating capital investment has been to increase demand more than potential supply. The result, as we all have perceived, is that we have seen a significant decline in the unemployment rate and a tightening of the labor markets. If this process were to persist, it strikes me as pretty much inevitable that we would have to be continuously tightening. This is because the excess of demand over supply of goods and services would reflect itself in an excess of long-term credit demands versus long-term savings. Were that the case, real long-term interest rates would be continuing to rise, but they are not. And the reason they are not is that personal consumption expenditures and spending on housing have moderated, and that slowing has helped to offset the very strong growth in capital expenditures. We don't know the eventual extent of the slowdown. Most of you have indicated that even though consumer demand has indeed slowed in your Districts, there is no evidence of any cumulative deterioration. Consumer confidence clearly has not deteriorated. So what we are looking at may well be a pattern of slower growth in household spending that could continue for a while yet. And so long as it continues, the pressure will be off the markets.

The acceleration of price inflation is essentially still a forecast. Ned Gramlich's table showed that the year-over-year PCE core is up only 0.3 percent. The July-over-July number is up a little more, but most interestingly the rate of increase of core PCE inflation for the last three months is, as I recall, only slightly higher than 1/2 percent at an annual rate. This is the lowest three-month number that I have seen in the series going back a number of years. But as Bill Poole points out, we may be missing the boat here by looking exclusively at the core rate when clearly energy prices are moving.

The electric power shortage is a very serious problem, as those of you in the West particularly know. Because demand for electricity had slipped for a while, new power plant

construction came to a virtual halt, abetted by environmental controls or regulations and a number of other obstacles that essentially dissuaded utility companies from building new power plants. So, we have ended up with what is a really serious potential crisis.

The crude oil markets are also tightening up. There is not all that much excess crude production capacity in the Gulf states, which is where almost all of it exists. Saudi Arabia has perhaps 3 million barrels a day of additional capacity. Kuwait has some. Iraq has some. But it is by no means clear what the inclination may be to produce and bring those crude supplies to market. As a consequence, the steady underlying growth in crude demand is having an impact on prices. OPEC production is lagging because it is very difficult for a country like Saudi Arabia, which has very significant fiscal problems, to increase its oil output knowing its aggregate revenues could very well fall as a consequence. Accordingly, as the Greenbook indicates, it is not clear that energy prices will automatically come down. It is true that the exploration and development budgets of the major oil companies have gone up very materially, and experience suggests that newer technologies have enabled the takeout from existing wells to improve markedly. As a result, additional sources of non-OPEC crude will become available, but not to a substantial extent before another year or two. It is hard to know what is going to happen before then.

Natural gas is a disaster waiting to happen. Here again, the earlier slowdown in demand for power left natural gas prices at relatively modest levels. As a consequence drilling declined fairly materially. And we are now in a position where the natural gas inventories in storage are about as low as I remember them.

In sum, we have a situation where all three major sources of power are strained and interacting on the prices of energy. In the circumstances, the notion of looking solely at core prices may still be comforting but only up to a very limited point. The reason is that rising prices that

ordinarily bring added supply forward clearly are working less than adequately to produce that result in the energy sector currently. As a consequence, while inflation has not worsened materially in the sense of a spillover of higher energy prices into core prices, that outcome is inevitable unless energy prices start to come down. Energy remains a very fundamental part of the cost structure even though admittedly very significantly less so than it used to be. But it is still significant enough to create a problem if we suddenly get a major acceleration in energy prices, especially in crude oil prices.

Where all this leaves us, obviously, is with a slowing economy but clearly one that has remarkably good characteristics of stability. The major excesses that we were all concerned about for the last couple of years seem to be diminishing. The gap between aggregate supply and demand is beginning to close. And indeed, the Greenbook forecast implies that that gap will narrow considerably more over the next year and a half. We obviously have a significant amount of monetary policy tightening still in the pipeline stemming from the policy moves that have been implemented since June of last year, including several moves earlier this year. Clearly, by any measure those policy actions could not yet have worked their way fully through the system. So we are in a situation where a lot of things could be fairly significantly worse, but they are not. I conclude from all of this that we ought to stay where we are. There is no need to move at this particular point. At the same time, it would be highly risky in my judgment to depart from the bias that we used to call “asymmetric toward tightening.” I still have not learned the language we are now using to describe our policy bias! In any event, my cost-benefit analysis of where we are at this stage and where we want to be leads me at least for now to a no change directive and retention of the statement that the risks are toward higher inflation. I would like to put that out on the table for discussion. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I support your recommendation. I want to talk a bit about the balance of risks sentence we have been using in the press statement as

opposed to the asymmetry language we previously had in the directive, and how much we have benefited from that change. I think what we mainly have accomplished is to convince the marketplace--and slowly the economists in the marketplace--that we are in fact looking over the longer run and not from meeting to meeting. They are now convinced that the Federal Reserve is looking at monetary policy as it affects the economy over a longer period of time. Therefore, the balance of risks statement toward either inflation on one side or toward too weak an economy on the other, I believe, has had a very considerable positive effect on our ability to carry out policy. It certainly does not change the need for us to take action when action is appropriate.

There is, I think, a lingering debate within the Committee about what we need in order to have high credibility. Basically, what I think we need is the reputation of having good judgment and courage--the judgment to evaluate the risks in a reasonable way and to decide what is the right course of action and then the courage to take the action. It is easy to make the right decision if it is perfectly obvious what it is. That is never the case with us. We are always looking through a dark glass, thinking about what is the best thing to do and then acting courageously to do it. In my view the Committee has a very, very high reputation in that regard and it is something that is of immense importance to us.

Today I think we clearly have to look at the economy in the way you have suggested. I agree that maintaining the present stance of policy is appropriate and, certainly, we should continue to reflect our view that the balance of risks is toward rising inflation.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, I support your recommendation. I would say that policy right now is tight and the issue is whether it ought to be tighter. We certainly can wait to see whether that is the case. One comment on the bias: As a suggestion, I wonder if we should not consider

taking out the lone reference to tight labor markets as the reason for our bias. I don't know that there is a one-to-one mapping into inflation over the time horizon we have been talking about. Given your comments, as well as those of others here today, it seems to me that we see other risks that are just as important right now in leading us to this bias. I think they also ought to be considered, or certainly that tight labor markets should not be given more consideration in our statement than these other risks.

CHAIRMAN GREENSPAN. I can't speak for everybody. I think we are moving in that direction but I don't think we are there yet. I believe the labor market still is the overwhelming problem but clearly less so proportionally than it was, certainly at the last meeting.

MR. HOENIG. In my view it is something we ought to consider as we go forward.

CHAIRMAN GREENSPAN. I think that is a valid issue to raise at the next meeting.

President Poole.

MR. POOLE. Mr. Chairman, when I went to the airport yesterday morning in Bozeman, Montana to fly back to this meeting I was a little concerned about whether the flights would be running on time. I asked the clerk whether I would be able to get back to Washington for this meeting. I'm sure he did not know who I am but he said: "Tell Alan Greenspan to leave the economy alone." [Laughter] Apparently you agree and I support your recommendation.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Mr. Chairman, I'm comfortable with and support your recommendation. Absent some big surprise, I think we have the luxury of letting this play out. I would just underscore Bill McDonough's comments about not doing anything to detract from the notion that we are on watch and are prepared to move when we need to.

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. I support your proposal not to change the fed funds rate and to retain the statement that the balance of risks is on the side of higher inflation. I think we need more time to see what is happening with the real economy. Nonetheless, the balance of risks appears to remain on the side of higher inflation over the horizon. If the indicators of inflation point consistently toward higher inflation, then we should respond, and I think we should remind the markets of our resolve in that regard.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, I agree with your recommendation. I think this would be a good time to leave the funds rate unchanged so that we can see how things unfold before considering another tightening action. I also believe it is important to retain the statement adopted in June that the balance of risks continues to be toward higher inflation.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Mr. Chairman, I support your recommendation for no change in the funds rate and to maintain the assessment that the risks are still unbalanced toward higher inflation. I just want to give a perspective on the unbalanced risks issue.

Whenever we have an acceleration of productivity growth, we have the following choices: We can take it for a while in temporarily higher output or we can take it in potentially permanently lower inflation. I think so far what we have done is to take it all in the form of higher output. Core CPI inflation today is exactly the same as it was at the end of 1995 on a methodologically consistent basis. That is fine. But I would argue that we have to be particularly vigilant about an upward creep in inflation going forward because once this productivity acceleration effect dissipates, inflation will rise. And it is better if that rise takes place from a level closer to our long-run inflation objective than from a level that has already drifted above it.

The second reason is that an acceleration of productivity is the classic opportunity for opportunistic disinflation. So, it does seem a little strange to allow an extraordinary experience of an acceleration of productivity to be accompanied by an upward creep in inflation. For both those reasons, I think we need to stay with the statement on unbalanced risks. I think they are unbalanced and even though inflation performance remains very favorable, I believe we have to be very vigilant about rising inflation going forward.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Mr. Chairman, I support your recommendation, especially your recommendation to keep the tilt in place. I think it would be premature to remove it. Also, Tom Hoenig's suggestion resonates with me and I hope we will look at that again in the near future.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. I, too, support your recommendation, Mr. Chairman, including the bias toward concerns about heightened inflation going forward. As I indicated earlier, I do think we have some additional time to assess that situation, and given current real interest rates I believe we are not too far from where we need to be even over the longer run.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Mr. Chairman, I support both parts of your recommendation. I think Larry Meyer made a useful cautioning remark that given the productivity shock, we are benefiting from a little good luck, if you will, on inflation. It is different from the good luck we had in 1998 but it is good luck. And we should keep that in mind and be alert. I have always argued for being as alert as we can possibly be. But luck comes in all shapes. I don't want to overdo the nostalgia bit, but I can remember times when oil prices went up about as much as they have in the last couple of years and the inflation situation was far worse than it is now. I can remember investment booms like we

are having now and the inflation situation was far worse. So, if we really take this situation apart, we might see that we also have some forces working in the direction of high inflation that we may be under appreciating. I don't want to push that theme too hard and I think we should remain vigilant. But when we talk about luck, it is easy to count the things on one side of the fence and not the things on the other side of the fence.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. I am also in agreement with your recommendation, Mr. Chairman. I think we should wait to see more data on how the economy is shaping up--slowing perhaps--and how productivity trends seem to be developing in the latter part of the year. I, too, think that the balance of risks statement is vitally important. In my view we would send a very difficult message for the markets to deal with if we did not retain the existing balance of risks statement. I believe the risks are on the up side. I like the way Governor Meyer put the analysis in terms of questioning why we aren't seeing inflation moving down with such a productivity surprise and why we aren't seeing that when we look ahead with such a productivity surprise. And that is worrisome to me. I would not like us to be associated with fiddling while Rome burns, but I don't think we are. I think this is a time when we can afford to wait and see.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. I agree with both parts of your recommendation. I think this is a time to pause and take stock. We have seen slowdowns before that were just temporary and the expansion picked up again quite rapidly. And there is the question of whether a slowing in growth that is more sustainable would be enough to cap inflation or whether the economy really has to grow at rates below trend in order to relieve some of the pressure that has been built up. Obviously this is an open question. If the inflation data deteriorate due to energy as you

discussed, or for other reasons, or if demand expands further beyond potential output, then I think we have to be prepared to act very quickly. But for now I believe it is appropriate to follow your advice. And I certainly agree that the balance of risks clearly is tilted toward higher inflation.

CHAIRMAN GREENSPAN. Governor Kelley.

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

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. I agree that leaving the funds rate unchanged at this point is the right thing to do. I am also sensitive to the communications issues involved; it would not be desirable to communicate the expectation that we are not going to raise the funds rate in the foreseeable future or to imply that the next change might be down rather than up. But it is a challenge as to how to avoid communicating that.

Regarding the language on the balance of risks, part of me would like to say that the statement should always be that an unavoidable, permanent feature of a fiat money system is a balance of risks toward higher inflation. [Laughter] If it ain't going down it's going up! But since I am not likely to win that one, I think we do have to spend a little more time here on what it is that leads us to believe that the balance of risks is toward higher inflation. I say that because in some of the discussion today and in previous meetings it sounded to me as if we worry that higher productivity through various avenues--through demand increases, wealth effects, higher real interest rates, and liquidity injected by the central bank--causes higher inflation. And as Governor Meyer suggested, we worry that lower productivity causes higher inflation. So, until we sort out a little better whether higher productivity causes inflation or lower productivity raises the risk of inflation, we are not quite ready to explain why we think the risks are toward higher inflation.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. I support both parts of your recommendation. I feel a bit drawn into the discussion about the communication of the balance of risks, having spent nine months working with a number of you in trying to sort this out. I probably shouldn't act on that feeling, but I will. First, I certainly commend and have always listened to the wise counsel of our Vice Chair, and I agree that we actually have succeeded to some extent in communicating something here. I am quite sympathetic to what Jerry Jordan just said, though. And what Tom Hoenig said is also relevant: In my view there are a number of things that are leading us to communicate that we think the risks over the foreseeable future are toward greater inflation. Some of the reasons have to do with the labor markets, and one can say that without necessarily being a firm believer in a particular number with respect to the NAIRU. So, I am comfortable with keeping in that reference to the labor market. But like Tom Hoenig, I do think that what I am hearing is a broader range of concerns having to do with other elements of the real economy--and in my case, maybe not for others, having a bit to do with some financial conditions. I don't at all sense that we should change our communication tool at this meeting. But in my view Jerry quite appropriately reminded us that we worked hard to get to this language--not because we thought it was an easy out from a difficult problem but because we thought it was going to help the public in its analysis of our policymaking. So, as we go forward during the course of the year--regardless of what we do with interest rates--I think we have to be clear about what is driving our assessment of the risks. I say that because doing so will give the market a chance to look at the same things we are looking at. And if we're looking past the unemployment numbers to other factors, we at least ought to signal that to the market as best we can. Thank you.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. I support your recommendation.

CHAIRMAN GREENSPAN. Would the Secretary read the appropriate language for the directive and the statement that the balance of risks is toward inflation?

MR. BERNARD. I'll be reading the wording from page 11 in the Bluebook: "The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee in the immediate future seeks conditions in reserve markets consistent with maintaining the federal funds rate at an average of around 6-1/2 percent." And the statement in the press release would read: "Against the background of its long-run goals of price stability and sustainable economic growth and of the information currently available, the Committee believes that the risks are weighted mainly toward conditions that may generate heightened inflation pressures in the foreseeable future."

CHAIRMAN GREENSPAN. Call the roll please.

MR. BERNARD.

|                         |     |
|-------------------------|-----|
| Chairman Greenspan      | Yes |
| Vice Chairman McDonough | Yes |
| President Broaddus      | Yes |
| Governor Ferguson       | Yes |
| Governor Gramlich       | Yes |
| President Guynn         | Yes |
| President Jordan        | Yes |
| Governor Kelley         | Yes |
| Governor Meyer          | Yes |
| President Parry         | Yes |

CHAIRMAN GREENSPAN. Lynn Fox, would you hand out the version of the press release that hopefully captures the substance of the Committee's discussion? [Pause] Is this statement satisfactory to all concerned?

SPEAKER(?). Amen!

MR. GRAMLICH. Could I just raise one point? I think the statement is fine. I don't want to talk about that. My point is that increasingly on TV programs we are seeing comparisons of what

we said at the last meeting and what we are saying today. I wonder if it's possible, since some of us don't remember exactly what the press statement said after the last meeting, if we could have a little reminder of the changes made in the statement?

CHAIRMAN GREENSPAN. Obviously we can give you the whole statement, but what we can do, if you prefer, is to give you the operative paragraphs. There are only really two operative paragraphs in this.

SEVERAL. Yes.

CHAIRMAN GREENSPAN. The rest is boilerplate. We could do that readily so that you would be able to compare them fairly quickly.

MR. GRAMLICH. I don't know if anyone else feels this way, but if market observers are going to start looking at exactly how we change a comma from last time, I guess I want to know about it.

CHAIRMAN GREENSPAN. I will say that when we draft this, we do it with precisely that in mind. But we may not do it to your satisfaction. [Laughter] It may not be a bad idea to have the comparison in front of us.

MR. GRAMLICH. I may just not remember.

CHAIRMAN GREENSPAN. Nobody remembers these things! In any event Lynn, let's do that next time. The next meeting will be on October 3<sup>rd</sup> and we will now adjourn for lunch.

END OF MEETING