

Meeting of the Federal Open Market Committee

May 16, 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, May 16, 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 and Stern, Presidents of the Federal Reserve Banks
of Dallas and Minneapolis respectively

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

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

Mr. Fisher, Manager, System Open Market Account

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

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

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

Messrs. Oliner and Whitesell, Assistant Directors, Divisions of
Research and Statistics and Monetary Affairs respectively,
Board of Governors

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

Messrs. Rives and Stone, First Vice Presidents, Federal Reserve
Banks of St. Louis and Philadelphia respectively

Messrs. Hakkio, Hunter, Lacker, Lang, Rasche, Rolnick, and Rosenblum,
Senior Vice Presidents, Federal Reserve Banks of Kansas City,
Chicago, Richmond, Philadelphia, St. Louis, Minneapolis, and
Dallas respectively

Messrs. Bentley and Kopcke, Vice Presidents, Federal Reserve Banks of
New York and Boston respectively

Transcript of Federal Open Market Committee Meeting of
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CHAIRMAN GREENSPAN. Good morning, everyone. The changed structure of the seating around the table today reflects a desire to get a better perspective on the economy! [Laughter] Actually, this type of seating arrangement has worked out very well at our regular Board meetings. But if it doesn't work for the FOMC, we can always go back to the way we were before.

This is Mike Prell's final meeting. Mike goes back into antiquity with the institution. Mike, have you ever missed a meeting?

MR. PRELL. I've missed a few.

CHAIRMAN GREENSPAN. So, he may in fact be uttering his last official words here today. But like many of our colleagues who have left, his imprint clearly is going to be on us for a good long time. And if we happen to get off track after this meeting, somebody is going to do a regression that I don't think any of us is going to like! In any event, Mike, we wish you well.

MR. PRELL. Thank you.

CHAIRMAN GREENSPAN. We will have many occasions to say that to you before you leave. There is still a fairly large number of days before your official retirement.

As you know, at today's luncheon we're going to bid our official farewell to Ed Boehne. Obviously, Ed is not participating in our meeting today; and Bill Stone is here with us this morning to represent the Philadelphia Bank.

Would somebody like to move the approval of the minutes of the last meeting?

VICE CHAIRMAN MCDONOUGH. So move.

CHAIRMAN GREENSPAN. Peter Fisher, you are on. Where are you?

MR. FISHER. Over here, Mr. Chairman! [Laughter] There is a package of charts and text in front of you, which on the first page has a summary of my remarks.¹

Let me apologize in advance for the length of my report. I will try to cut to the chase. Also, I should note that all the typos in the written material are my own, as yesterday I engaged in the illusion that last-minute changes result in improvements.

I will discuss domestic market developments with respect to policy expectations in short-term rates, movements in the euro as a consequence of capital flow leads and lags, and the current shape of U.S. yield curves.

With respect to domestic operations I plan to cover four topics, including the mix of operations since the previous meeting, current conditions in the Treasury market, and the impact of Federal revenues and Treasury refunding plans on the flow of new Treasury issuance and System operations. Then I would like to present to the Committee a proposal for interim System operations that I'd like to discuss with the Treasury. And at the end of my remarks I will remind you about some foreign matters on which I sent you a memo.

Turning to the second page of the package, which shows forward rates, you can see in the top panel that U.S. forward rates have risen sharply since mid-April, when they had dipped a little following the release of the CPI and more importantly the stock market turmoil around mid-month. Since then they have moved up, most briskly on the release of the ECI on April 27th and then again a little on the publication of the nonfarm payroll report on May 5th. It is interesting to note, however, that compared with the peak of these forward rates just after your last meeting, the 9-month forward 3-month rate-- the top dashed line--is only 25 basis points higher whereas the 6-month forward 3-month rate--the solid red line--is 45 basis points higher. There is some "collapsing in" of the market's expectations of how far the Committee is likely to go in tightening, even as more aggressive actions are being priced in over the near term.

In the middle panel, you can see that euro forward rates have backed up from their low levels in essentially three steps over the period. First, they moved up as the euro broke below 95 cents; then they rose quite modestly after the ECB raised rates 25 basis points on April 27th and rose again after the May 2nd release of euro area M3

¹ A copy of the material used by Mr. Fisher is appended to this transcript.

and the purchasing managers' index. The market certainly has a sense of backing up and raising forward rates in Europe as the euro has weakened.

The bottom panel depicts Japanese forward rates, which have drifted lower over most of the intermeeting period and spiked down on the release of the negative household spending number on May 9th. It has been my impression during this period that the Bank of Japan has been waving its arms in the air, trying to get people's attention and communicate that it might actually raise rates at some point. I think the market is under-assessing the earnestness with which the Bank of Japan is trying to send that signal. It is very much my sense that Bank officials feel somewhat as our Chairman did in 1993 and early 1994: They are trying to warn everyone that a rate increase is coming and no one is listening.

Turning to page 3, I would like to talk a little about the euro's weakness, which I see as a function of two factors. The principal factor is the exceptional leads and lags in capital flows, which have been punctuated, if you will, by the extraordinary cyclical developments in the United States over the last couple of years. Each of the three panels shows data for the 17-month period on either side of the January 1, 1999 launch of the euro. The top panel depicts 2- and 10-year U. S. and German swap rates and a 10-year Italian rate up until the launch of the euro, and then the dollar and euro rates after that time. In the middle panel are the euro/yen and euro/dollar exchange rates. And the bottom panel shows the Italian stock market in purple, the S&P 500 in red, and the German stock market in blue, all indexed to August 1, 1997.

Looking back over this period, it seems to me that non-European investors bought the rumor of the euro before its launch. You can see that in the rally in Italian and German 10-year swap rates and also somewhat in the Italian and German equity markets in late 1997 and into 1998. And talking to people over that time period, there were anecdotal reports of a flow of non-European capital into the euro zone as investors bought the rumor of the creation of the euro. During this same period, euro-zone businesses braced themselves for the launch of the euro by hoarding cash. Many of us no doubt remember Governor Trichet of the Bank of France complaining repeatedly about how their corporate sector was hanging on to high levels of cash--building up a war chest for the more competitive environment they expected with the launch of the euro--rather than investing.

Since the introduction of the euro, it appears that European businesses have actually been diversifying out of the euro area, as FDI

and portfolio flows away from the euro zone have picked up. That seems to me to reflect an effort on their part to catch up with the process of globalization and diversification that has seen U.S. corporations at the forefront. Now, inward investors into the euro area--and the intermediaries who bought the euro exposure from the outward investors--all hung on, waiting for the strong euro to materialize around the start of this year and expecting finally to get the rally they had been looking for. But this was just when U.S. cyclical developments gave them the "double whammy," if you will. The last quarter of 1998, as investors were anticipating the launch of the euro, was just when this Committee was easing rates.

There was much excitement about whether there would be an economic slowdown and there were strains in the markets. At that point the spread between 10-year U.S. and German swap rates stood at 80 basis points and the spread between their 2-year swap rates stood at 120 basis points. Since then those swap spreads have doubled. The 10-year U.S./euro swap spread is 190 basis points and the 2-year spread is 240 basis points. While those who were hanging on to euros were hoping for the euro to rally and the U.S. economy to slow down, just the reverse has happened.

If you look at the bottom panel and the recent equity rally, you can see that the one place from which U.S. equity values might look cheap would be Milan; that is just one of the head fakes that occurred to the exchange market. Everyone expected that the hiccup of the NASDAQ in U.S. equity markets in April might be the occasion to spark a rally in the euro. On the contrary, it appears that European businessmen, looking at their market valuations vis-à-vis U.S. valuations, saw that hiccup as a buying opportunity. And from the newspapers, which one has to follow to see these developments before they get picked up in the data, one can read about a continued flow of deals involving European purchases of U.S. assets.

The euro bounced up at the end of last week amid a hail of discussion and threats of intervention by prime ministers and central bankers and finance ministers from all over Europe; but the bounce was not much more than one would have predicted even without all of that rhetoric. To me, the fact that it got only that rather marginal bounce was again a somewhat bearish sign for the euro.

Let me briefly cover the material on domestic yield curves on page 4. These are the charts I have shown you before on yield curves for U.S. Treasury securities, interest rate swaps, Fannie Mae issues, and Ford Motor Company debt. The yield curves shown are as of the close of the day of your last meeting and as of last Friday. As you can

see, the U.S. Treasury yield curve is a little higher but also a bit more inverted than it was at the time of your last meeting. All three of the non-Treasury yield curves have more or less backed up by around 50 basis points, or maybe a little less. Thus credit is more expensive than it was at the time of your last meeting. But even with credit spreads widening to quite wide levels by the standards of the last several years, my impression is that habitual notions of appropriate spreads to Treasuries are still exerting a downward pull at the long end on all non-Treasury issues. Treasuries are acting as somewhat of a magnet, pulling the long end of these yield curves down.

Turning to domestic operations, I have outlined on page 5 some key points regarding our mix of operations since your March meeting. At that meeting I spelled out my plans to try to determine what would be a comfortable pace of outright purchases of Treasury coupon securities. I said that I thought we could target 35 percent for our participation in Treasury bill auctions but would allow that to go up to 40 percent in the next month or so, as we expected bill sizes first to shrink and then to rise again later in the year. I also noted that we would use a mix of 30-, 60-, and 90-day repos to meet the balance of reserve needs and that we would not be purchasing bills outright until after the Treasury's refunding announcements.

In response to views expressed by Committee members and my assessment of changing market conditions, we in fact purchased \$4.2 billion in coupon securities on five different days. The principal constraints were the Treasury's buy-back operations and the novelty of those operations being quite a big deal in the market. The Treasury had a rather big window, a two-day notice window. That eliminated a number of days when we might have been tempted to operate.

We also purchased \$2.3 billion in bills for System account on April 11th. On that occasion we conducted operations from which we learned something by doing. On the first day of the quarter,

That was not something I was expecting to wake up to that morning; their request was a consequence of their intervention the prior evening.

it seemed to me that the bill market adjusted rather well to that rather large effect on supply. So, on behalf of the Committee, we purchased \$2.3 billion of bills on April 11th for our own account.

We redeemed \$1.6 billion of securities at auction--\$977 million in bills and \$568 million of the last 7-year note. We now hold 40 percent of two bill issues. But on two other issues that we anticipated

bumping up our share to 40 percent, we ended up with a lesser share of the total outstanding as a consequence of the large add-ons

And the Treasury in this case ended up with more cash than they wanted.

Occasionally we have used 28-day repos to meet our underlying reserve needs. We now have four separate 28-day repos on our books for a total value of \$8.2 billion. Most of our repo operations over this period have been for only a few days' duration because of the great volatility in the Treasury's account.

On the next page of charts I have tried to convey a picture of the conditions in the markets in which we operate. My assessment is that the bill market has made a reasonably smooth transition to the new supply conditions it is encountering. But I think the long end of the curve is having a harder time making that adjustment, in part because of the abrupt changes in supply and obviously in part because of the policy actions this Committee has been taking.

The upper left chart depicts bid/ask spreads on 3-month bills going back to January 1997. You can see the increases in those spreads in January 1998 when the supply changes were beginning to come through to the bill market and then the dramatic spikes reflecting the chaos of October 1998. But over the last six months or so the spreads have about stabilized in the bill market. In the bottom left panel are bid/ask spreads on the 10-year note. While they seemed to be stabilizing last year at higher levels than prior to the crisis period of 1998, the trend now is a continuing widening of bid/ask spreads in the 10-year note market.

On the right-hand side of the page are spreads of the 3-month bill to LIBOR and of the 10-year note to the 10-year swap rate. I would just note that in the 10-year area we are still seeing a widening out of the spreads, which is merely another reflection of the greater uncertainty the market faces at the long end. Moreover, even though the spread of the 3-month bill to LIBOR is volatile, I think it is more or less staying in a modest range that gives the market some comfort.

On page 7, Mr. Chairman, I have outlined recent developments with respect to Federal revenues, surplus estimates, and the Treasury's refunding plans. These developments obviously have an impact on the flow of new Treasury issues and on System operations. At the end of March, the Treasury's plans for debt issuance reflected the Administration's forecast for a surplus of \$176 billion in fiscal year 2000. On the basis of April receipts, the Administration's current forecast is for a surplus of \$226 billion. At its quarterly refunding in

early May the Treasury announced its intentions to buy back no more than a total of \$30 billion this calendar year, reiterating what it has said previously. However, I think most knowledgeable observers expect the Treasury to be buying back more next year. Treasury officials also stated at the time of the May refunding that they would maintain the 10- and 30-year programs. But I think that statement also was about this calendar year. In my view, the 30-year program is at some risk going forward at least with this Administration.

They also announced their intention to eliminate the 1-year bill once Congress adopts some technical amendments and to trim the size of the 2-year monthly note auctions. They indicated, too, that further increases in revenue would likely lead to a switch from monthly to only quarterly 2-year note auctions. In addition, although this has not been announced, the Treasury has told us that the amount of bills likely to be issued each week for the rest of this year will be reduced by more than 20 percent. That means the amount auctioned weekly will be down to \$16 billion for the rest of the year, not just for the brief period in April and May that we were anticipating.

These reductions in the Treasury's issuance plans obviously have implications for our operations this year. The table on the next page, page 8, shows projections of the Treasury's debt issuance over the remainder of the year, projections of the percentages to be purchased by the System, and estimates of the System's net redemptions. I won't go through all of it with you, but I'd highlight the top two rows. The first row shows the Treasury's issuance plan by refunding quarters, May to July, August to October, and November to January. In the left-hand box are the figures projected in March--that is, what we were looking at around the time of your last meeting. Going across the page, the next box shows what our holdings would have been. And the next box indicates what our net redemptions would have been under the plan of holding up to 40 percent of any one issue this quarter but going back down to 35 percent for the rest of the year.

On the right-hand side of the page, the next three boxes show you the currently projected figures for those same variables--the Treasury's issuance plans, the reduction in our holdings under the 35 percent objective, and our implied redemptions. But now the implied redemptions become somewhat more material in maintaining the 35 percent limit. For the 2-year note, for example--the next set of boxes, which I have put in bold print--the percent of our holdings as a consequence of the reduced size of the Treasury's offerings would be moving up significantly. Moreover, that still assumes monthly auctions and we face the risk going forward of the Treasury cutting back to quarterly auctions.

Let me go over with the Committee a proposal for interim System operations that I would like to discuss with the Treasury. The key points are summarized on page 9. At your last meeting, I thought we might be able “comfortably” to purchase outright up to \$20 billion in Treasury securities. In light of both Committee members’ views and the changes in the outlook for new issuance, I have tried to devise a means to increase the amounts we would be purchasing. Given the uncertainties the Treasury faces in debt management and the impact of our operations on their primary and secondary markets, I would like to inform them in advance of my plans for managing the System Open Market Account (SOMA) over the coming months, in part to permit them to adjust their strategy. It will also be vital for us to communicate clearly to market participants any changes we make in our strategy.

In brief, I would like to operate SOMA on a schedule for participation in Treasury auctions that essentially locks in the status quo in the percentage of SOMA’s holdings acquired in the primary market. I would then like to increase the pace of outright purchases of coupon securities, skewing our purchases both to the middle and the shorter end of the yield curve. We would also need to rely on 28-day repos to meet the reserve needs that cannot be filled through this process and to serve as a buffer between the timing of redemptions and outright purchases.

I have provided for your information a very rough approximation of just three of the reserve factors we face over the coming months, from now until the end of January. Our current underlying reserve need for this period is \$21 billion. The implied redemption from the 35 percent bill limit would be \$42 billion. And the New York staff forecast of 8.5 percent growth in currency adds \$22 billion, for a total of \$85 billion. I want to be very clear that this figure takes into account only three reserve factors. We know there will be demonetizations of SDRs that will add to reserve needs, and we face a risk that the Treasury’s cash balance will be higher and spill over into further reserve needs. So this is not a topside estimate of our reserve needs. We know other factors will tend to add to those needs.

Turning to the next page, as I have indicated there, we face both a stock and a flow problem that we are trying to address. As a number of you noted at the last meeting, with over \$3 trillion in marketable Treasury debt outstanding it seems clear that we ought to be able to find sufficient assets to grow the SOMA balance sheet from the existing stock. However, the amount of marketable Treasury securities outstanding with remaining maturities of more than 10 years,

exclusive of SOMA holdings, totals only \$433 billion. And that amount will decline as a consequence of both Treasury buybacks and System purchases. There is also strong demand for these long-duration assets in foreign and domestic private portfolios, as reflected in the inverted yield curve. While relatively comfortable with private credit risks for shorter duration assets, investors perceive few acceptable long-term substitutes for Treasury securities. Thus the stock of such Treasury issues is not large relative to apparent demand and that stock is expected to decline. The total flow of new Treasuries reaching the securities market has continued to decline, with total issuance exclusive of cash management bills falling from a little over \$2 trillion in 1997 to \$1.7 trillion this year. As I have tried to explain at previous meetings, my concern is this: If the growth of the System's balance sheet absorbs an expanding share of both the primary and on-the-run issues too quickly, there is a risk that System operations will come to be seen as a major disturbance, even if only transitional, in the price discovery process.

Briefly, it seems to me that we have some very basic portfolio objectives in that we have a preference for Treasuries as an asset class to grow our balance sheet. We have over time had a preference for the shorter rather than longer maturity issues. We have expressed that preference principally through our large holdings of bills, whose growth has been relatively limited in recent years. But some members of the Committee have expressed frustration to me that, with the reduction in the size of the bill auctions, the average duration has been creeping up rather than going down. The concerns center on our interest in maintaining sufficient short maturity assets to provide us with adequate maturity liquidity. It also strikes me that it is not obvious that we have much of an interest in paying a premium for the special liquidity of on-the-run Treasury securities.

In the current setting, it seems to me that the Treasury has three paramount debt management objectives. The first is to reduce the issuance of debt in line with revenues. The second is to avoid a lengthening of the average maturity of its outstanding debt. And the third is to maintain issue sizes and key benchmark maturities to sustain an active secondary market. In trying to reconcile these interests, it seems to me that we could limit the System's share of the primary market and on-the-run issues in order to leave room for private demand, particularly for long-duration securities, as investors adjust to the reductions in supply. We could expand System holdings of off-the-run and shorter-duration Treasury securities to meet our balance sheet needs, in the process of acquiring as much of the preferred asset class as possible, and adjust SOMA to a shorter overall maturity that is

closer to our basic preference. Doing this will have an impact on the average maturity of privately held Treasury debt outstanding.

The particular proposal I am making is outlined on the next page. Let me say in advance that there is nothing magic about these numbers and percentages. They represent my best seat-of-the-pants judgment at this point and if someone has a better idea, I am all ears. But my suggestion is that we maintain roughly the status quo of our existing holdings as the share of SOMA participation in upcoming auctions; that would involve taking shares of the now-anticipated size of offerings in accordance with the percentages shown in the schedule at the top of page 12. We would tell the U.S. Treasury in advance that SOMA's bids at auctions would be the lesser amount of SOMA's maturing holdings or the percentage limit from the schedule. This would have only a very limited impact on our currently forecast rollovers. But in the event of further declines in issuance, this would hold constant the System's share of the primary market and, therefore, should increase the amount available for private demand from what it would have been otherwise. It also should assist the Treasury in forecasting and thus managing its cash position, which is an incidental benefit of some consequence to the Desk.

We would also take the schedule to imply a graduated set of guidelines for SOMA outright purchases of off-the-run issues. Over time we would make outright purchases in the primary market under the following schedule: up to 15 percent of securities with remaining maturities between 10 and 30 years; 15 to 20 percent of securities in the 5- to 10-year area; 20 to 25 percent of securities in the 2- to 5-year range; and 25 to 35 percent of securities with a remaining maturity of under 2 years. Also, we could perhaps continue to bid as we have been for 5 percent of inflation indexed securities at auction, and we might be prepared to bump that up to 7.5 percent in the secondary market.

Page 13 shows in the second row the very marginal impact this would have on net redemptions. There would be no change in the bill redemptions and we would have rather modest redemptions of the 2-year note if we applied this schedule to our primary market operations. But we would share in the upside risk that the market would experience if issue sizes decline. In that case we would be taking smaller nominal amounts and our redemptions would grow.

The chart on the next page tries to depict the opportunity we have to implement this plan. This shows SOMA holdings as a percent of the size of outstanding issues. The blue bars are bills and the other colors show coupons in various remaining maturity brackets. The bold

red line represents the proposed guideline graduated for each and every issue in the Treasury yield curve. The white area under the red line gives you a sense of the size of the opportunity we would have to purchase these issues if we skewed our demand toward the shorter end of the maturity spectrum.

Turning to page 15, I have shown that a very rough calculation of the amount available for purchase using this schedule would be around \$178 billion. We would continue our current practice of waiting to purchase new issues until they are thrice off-the-run. This compares with a comparable reserve need of \$88 billion through the end of January, which is close to the \$85 billion estimate I mentioned a moment ago plus the \$3.7 billion in redemptions implied on the 2-year note. Again, I want to emphasize that these numbers are very rough and intended for illustrative purposes.

The pace of outright purchases could have a strong impact on the Treasury yield curve, tending to produce lower yields, and at least in the short run could be seen as being at cross purposes with the Committee's policy actions. This could also be seen as a reverse operation twist even though it is motivated, in my opinion, by the System's reasonable portfolio objectives. I doubt that we could comfortably purchase the full amount of our reserve needs for the remainder of the year--\$80 billion to \$90 billion--under this schedule within the next six or seven months. But provided we communicate clearly to market participants about this radical change in SOMA's secondary market behavior, I think we could purchase considerably more than the \$20 billion I was suggesting at your last meeting. One of the features of this plan is that we would be limiting our purchases at the long end and leaving the market a little more leeway to express its demand there.

Finally, I would remind you that this is clearly just a stop-gap measure. It delays the onset of problems meeting our reserve needs. If Treasury's supply were to begin to expand over the coming year or so, we would have assets to roll into. However, if Treasury's supply continues to decline over coming years, SOMA's need for new assets would only have been delayed.

Let me turn now briefly to the recommendation I sent to the Committee in a memorandum on May 11th regarding the renewal of our swap arrangements with Mexico and Canada and noting two changes in our investment practices. The latter do not require a Committee vote. I will need a vote to ratify our domestic operations, Mr. Chairman, and a separate vote to approve the renewal of our swap

arrangements. I would be happy to answer any questions and, again, my apologies for taking so much of the Committee's time.

CHAIRMAN GREENSPAN. On the contrary, I thought that was an exceptionally worthwhile presentation. Indeed, it strikes me that you at least have come to grips with the concerns that I had at the last meeting. What you did not mention is that the on-the-run/off-the-run spreads, which have been a measure of illiquidity in the system, are going to be arbitrated down. And that is probably a valuable thing to have happen; it is very clearly desirable for any market. Why the spreads between riskless assets with the same maturity are as large as they are, wholly on the grounds of the degree of liquidity, doesn't strike me as something that is altogether desirable.

Secondly, unless I misunderstand the nature of the program, you will be picking up a number of issues. And in the low probability event that indeed we run out of issues for the public by 2013--or sooner the way it is going--the Treasury won't have to go into the market to bid for those securities. We in effect will have swapped them out with the Treasury and there would be no market pressure. Effectively we are pre-retiring the issues for the Treasury, and that is not a bad idea. Now, no one can forecast with any degree of accuracy what the federal budget surpluses are going to be in the future. And obviously no one can make a judgment as to whether this program is more than just a stop-gap measure on the way to the disappearance of the Treasury market, in which case this is all moot. But all in all, I think you have succeeded in proposing that we do something that, frankly, we probably ought to have done in the past, which is to emphasize off-the-run issues. Essentially, an endeavor to move the liquidity premium from on-the-run to twice or thrice off-the-run issues with sheer money market mechanics strikes me as a desirable thing to do in any event. So, while you may have taken a good deal of the Committee's time, I think it was quite worthwhile.

MR. FISHER. Thank you. If I could just note, Mike Prell has wisely counseled me that the number I quoted to you on the Administration's surplus of \$226 billion is not for publication. That number is embedded in what the Treasury has in its cash forecast for the rest of the year, and that is not in the public domain.

CHAIRMAN GREENSPAN. Questions for Peter?

MR. MCTEER. I think we ought to grow our balance sheet with real estate!

[Laughter]

MS. MINEHAN. Texas real estate?

CHAIRMAN GREENSPAN. Are you recommending anything in particular?

MR. MCTEER. We could build buildings and ease Peter's problem!

CHAIRMAN GREENSPAN. On a wholly different issue, let me just quickly ask a question. Baas tend to sell at somewhat lower interest rates than BBBs. BBBs are 10-year maturities and Baas are somewhat longer. Is that the difference? In other words, is it the longer maturity that's creating the spread or is there a real risk difference between Moody's Baa and Standard and Poor's BBB?

MR. FISHER. You got me!

CHAIRMAN GREENSPAN. A rare event! [Laughter]

MR. FISHER. You are kind to say so!

CHAIRMAN GREENSPAN. This has nothing to do with this particular meeting, but if you could give me an answer on that later I'd appreciate it.

MR. FISHER. Yes, we will look into that. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Broaddus. Where is he? [Laughter]

VICE CHAIRMAN MCDONOUGH. He's to your right! [Laughter]

MR. BROADDUS. I wanted to ask a question--or I guess more accurately state an opinion--about the swaps. Is that proposal on the table now?

CHAIRMAN GREENSPAN. Yes.

MR. BROADDUS. What really worries me is that the continued existence of this facility puts us in a position where we can be drawn into actions that we may not want to be drawn into at some point. I question whether that is desirable. In my view it is not. I'm talking, of course, specifically about Mexico. The situation is very different now from what it was in 1994 when this swap was originally implemented. The Mexican economy is considerably stronger and the peso is floating reasonably successfully. So I just wonder whether this would be a good time to get out of this swap, as we've gotten out of nearly all the others.

CHAIRMAN GREENSPAN. I think you are raising a good point. I wouldn't think, with the Mexican election on the horizon, that this is the right time. But I do believe it may well be desirable to put that issue on the table and take it up at a later date. Obviously, we would need to consult with the Treasury Department on this. But at the appropriate time I think we ought to raise this issue. These swaps, which were put in place in an earlier period--and most of which we have eliminated--have had their day and are a true anachronism. But they still have a political value. And until we can dissipate the political value, it probably would be difficult to unwind them. But the notion that they will be implemented is as remote as our running out of Treasury securities. [Laughter] President Jordan.

MR. JORDAN. Thank you. My comment was going to be along that same line, that this absolutely would not be the time to fail to renew the swap arrangement with Mexico. That action could be far too easily misinterpreted. However, a year from now we will have a

new Administration in Mexico and maybe a new minister of finance and central bank head, and a new head of the central bank in Canada. So before we get to this point in 2001, I think it might at least be worth exploring with the Mexicans and Canadians an exit strategy from these swaps.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. I have two questions for Peter. First, on page 15 of his handout, what is the difference between the \$178 billion and the \$88.7 billion? In effect is it a reserve in case the surplus is larger than we think? How do we interpret that gap?

MR. FISHER. The \$178 billion is the product of the sequence of my thinking about how one could cap SOMA temporarily in our primary market behavior and in some way communicate that effectively to the market. The question is how to communicate effectively to the market that we were skewing our demand in the secondary market toward the short end. The \$178 billion is just the number that was very crudely calculated off a current snapshot, and too much stock shouldn't be put in it. It just gives a sense that there is a sufficiency of securities in the market if we use this formula that could carry us for a while. The \$88 billion, rounding to \$90 billion, represents the current reserve needs we see over the next seven months. Now, I'm not sure we are going to be comfortable buying \$90 billion over the next seven months, but we'll see if we can pick up the pace as we go along.

MR. GRAMLICH. So this really should be interpreted as a measure of how long you can follow the policies you are describing?

MR. FISHER. Yes, how long we could tread water in this way.

MR. GRAMLICH. My second question relates to the on-the-run/off-the-run issue. Is there some reason we haven't done that before? It seems like a logical idea.

MR. FISHER. We do not purchase on-the-run issues in the secondary market. My point has been that if we let our share of the primary market expand, we would be collapsing the market for the on-the-run issues in nominal terms. That's the only point. We have not been purchasing the on-the-runs. However, we have been suppressing our demand, if you will, vis-à-vis this schedule for decayed securities that are way, way off-the-run. You can see on page 14 that we've been trying more or less to work our way up toward 15 percent all along the coupon curve. In that sense we have been buying issues decayed way, way off-the-run more aggressively; issues decayed in the 7-year area and the 4-year area are way off. So it is in that sense that I'm making the distinction here.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I just have a comment. After our March meeting, I was not sure that even Peter would be able to come up with a formula that would satisfy all the instructions he received. I think it is quite extraordinary that he, in fact, has done that. And I believe he should be complimented.

CHAIRMAN GREENSPAN. I did! [Laughter]

VICE CHAIRMAN MCDONOUGH. I just wanted him to know that his boss also compliments him!

MR. FISHER. Thank you, both!

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

VICE CHAIRMAN MCDONOUGH. So move.

CHAIRMAN GREENSPAN. Would somebody like to move the renewal of the reciprocal swap arrangements?

VICE CHAIRMAN MCDONOUGH. So move.

MR. BROADDUS. I want to dissent on that vote.

CHAIRMAN GREENSPAN. The Federal Reserve Bank of Richmond dissents.

Let's move on to the economic situation. Mike Prell and Vince Reinhart.

MR. PRELL. Vince will begin.

MR. REINHART. The data on foreign economic activity that have come in since your March meeting have run high relative to our prior expectations. We have passed through much of this surprise to the level of foreign output in our projection for the first half of 2000 but have not seen as much reason to alter the pace of its subsequent expansion.

Despite the brighter prospects for the level of activity abroad, the dollar appreciated 3-1/2 percent relative to the major currencies over the intermeeting period. Evidently the upside surprises to activity in the United States outstripped those abroad, and interest rates rose more here. Even after taking account of this widening of the interest-rate advantage to U.S. obligations, though, we have been hard pressed to explain much of the strength of the dollar, especially relative to the euro. True, our economic activity continues to expand more rapidly than that in the euro area, and the cacophony of official responses to euro weakness raises doubts that necessary structural reforms will be forthcoming.

Be that as it may, with the strong external impetus stemming from the weak euro and growing momentum to domestic spending, the euro area should expand about 3-1/2 percent this year and next. Underlying this forecast is the belief that the European Central Bank is very likely to tighten in short order and eventually to raise its policy rate a total of 1-1/4 percentage points by the end of 2001. A downside risk to our outlook for spending, however, is that European officials' concerns about the value of the euro in the near term will extend beyond the essentially symbolic act of sterilized intervention, should that happen, to a firming monetary policy sooner and by more than we have assumed. Of course, that is a risk that could be made more palpable depending on the action you take today.

We are concerned as well that Japanese officials will fail to deliver the policy stance appropriate to ensure sustained economic expansion sufficient to work down the considerable stockpile of unused resources. There is little doubt that near-term readings on the pace of spending in Japan will be on the high side, even abstracting from problems with

measurement. As the news of this favorable first-half performance comes out, the Bank of Japan is likely to pick short rates off their zero floor, but only by a small amount. In our view, this near-term strength in the economy is a temporary spurt--not much more than a bounce-back from the sharp contraction in the second half of last year. Going forward, households will still be burdened by doubts about job security that will make them reluctant consumers, the lagged effects of the earlier appreciation of the yen will cut into net exports, and fiscal policy is scheduled to shrink its stimulus. As a result, Japanese real GDP growth is forecast to settle at below 1 percent over the last six quarters of the forecast period.

Because the expansion of activity among our other trading partners seems more assured, when we add it all up our forecast calls for output growth in the foreign economies of 4-1/2 percent this year and 4 percent next year. Of course, this outlook is shaped importantly by the past and projected path of the exchange rate. With respect to flows, the exchange rate acts to tilt global spending toward those regions where capacity pressures are less binding. Thus, today's strong dollar helps to direct some U.S. spending toward foreign markets, making our own substantial pressures on resources a bit less intense. Over time, though, that same level of the exchange rate contributes to a substantial--and deepening--current account deficit and an increasing reliance on foreign investors' willingness to hold increasing amounts of claims on the United States.

We have not been able to convince ourselves that those foreign investors will continue voluntarily to hold ever-larger stocks of debt at the current level of exchange rates indefinitely. And so, we've written down a path in which the dollar's value falls over the forecast period. The sense that returns on dollar assets will look less attractive over time to foreign investors also helps to explain the rise in longer-term yields on dollar-denominated assets in Mike's outlook. As any forecaster is wont to do, we have projected a path for the dollar's decline that is relatively smooth. In part, that represents our equivocation on when that process of adjustment will start. But when it does, it may not be so orderly or well contained. Of perhaps most relevance for your policy consideration, the decline in the dollar implies that the foreign sector will no longer be a force helping to absorb robust domestic spending and to restrain domestic inflation. Rather, less of any excess domestic demand will be satisfied from foreign capacity, and import prices--and likely tradable prices more generally--will be adding to domestic inflation.

The components of the revision to our outlook have offsetting implications for net exports and the current account going forward. The stronger level of foreign activity raises the world's demand for goods

and services overall, to the benefit of U.S. exports. However, because the dollar begins our projected path of gliding down from a higher altitude, relative prices over the forecast period work to favor imports and discourage exports more than previously. The net of these forces is incorporated arithmetically in the staff forecast as a shrinking negative contribution of net exports to GDP growth this year and next that is roughly similar to that in the March Greenbook. We also anticipate the current account deficit to deepen to \$525 billion by the fourth quarter of 2001. This deficit represents about 5 percent of nominal GDP and is \$20 billion more than in our March forecast. To the extent that you agree with the staff assessment that the implied accumulation of U.S. obligations abroad will strain foreign investors' patience, the likelihood of the dollar depreciation we've projected--and the risk attendant to that outlook--would seem just a bit more considerable.

MR. PRELL. As you know, two major statistical releases came out this morning: housing starts and the CPI. We've distributed a table summarizing those reports.

Total starts were up about 3 percent in April, reflecting a rebound in multifamily units from March's low level. That single-family starts were stable, rather than falling off, runs counter to our expectation, but the significance of that reading is called into question by a 6 percent decline in permits. Thus, the pattern of indicators in this sector continues to be ambiguous, with just hints that the residential building cycle is about to turn down.

As for the CPI, the overall index was flat and its core component rose 0.2 percent last month. Food prices increased less than we anticipated, but energy and core prices were in line with our expectations--the latter admittedly with a surprising jump in the tobacco category. The 12-month change in the core backed off to 2.2 percent, after spiking to 2.4 percent last month. That number is the same as a year ago, but still about a quarter point above the cyclical low.

At this stage of our analysis, I don't see anything in today's news that would require us to make any fundamental change in our Greenbook forecast. If I were to summarize that forecast briefly, given my imminent departure--and with apologies to Madame de Pompadour--it could be *apres moi le deluge*. Maybe that's just a tad overly dramatic, but the picture we've painted of what lies ahead certainly is less attractive than the landscape of the past few years.

To be sure, our baseline projection is that, with only a moderate policy tightening--just a little more than the markets already anticipate--aggregate demand growth will slacken appreciably and overall PCE

inflation will run only in the low 2 percent area in 2001. But that result, in our analysis, hinges on a flat stock market and a considerable decline in oil prices--two notions to which the markets have proven notably resistant in the few days since the Greenbook went to press. And, importantly, our baseline projection indicates that, as you exit 2001, you'll find yourselves confronted with still extremely tight labor markets and an uptrend in core inflation.

We, of course, offered a simple solution to the projected inflation problem in one of our alternative scenarios: a bigger rise in short-term interest rates. The model simulation suggested that, if our baseline is correct, then a sharper elevation of the funds rate, to 8 percent by year-end, would check the pickup of core inflation. Indeed, this scenario might be characterized as akin to the "reverse soft landing" that has been mentioned so often. Another, perhaps less appealing, way to describe it would be a "growth recession."

The central point is that we think the signs are clearer now that the labor markets have become unsustainably tight and that an appreciable rise in the unemployment rate probably will be required to hang onto the bulk of the disinflation progress that you've made in recent years.

If our analysis is correct, even a further escalation of productivity growth will only postpone the day of reckoning. As productivity accelerates, you may get a temporary lowering of the effective NAIRU; but once wages begin to catch up with the improvement in productivity, the effective NAIRU will move back up and inflation will tend to rise. To be sure, it's possible that the longer-range natural rate has fallen, so that we may not have to see unemployment reach the level we would once have thought necessary, but our guess is that the increase will have to be noticeable. This is where an unhappy fact comes into the picture: There isn't any precedent, at least in our modern economic history, for realizing a substantial rise in our unemployment rate without a recession--not just a growth recession, but a meaningful absolute decline in activity.

One may reasonably ask: Are we really destined to repeat history, or might there be reason to hope that this time will be different? I'm not prepared today to offer you a full exposition of the ways in which the cyclical conjuncture or the structure of the economy today might be dissimilar from what it was in past episodes. I'll offer a few, brief comments, however.

First, from the viewpoint of the simple macro model, there are no logical grounds for ruling out the possibility of a fairly soft landing. One can envision a period of relatively slow--but continuously positive--

growth during which the pressures on resources are gradually relieved, and inflation is contained and then brought back down. How far above zero that growth might be on average would be a function of how large the current output gap is and how high potential GDP growth is. Combine a low NAIRU and a high potential growth rate, and there could be room for a distinctly positive expansion pace.

But, backing away from the ethereal, it does seem as if our formal models and even our judgmental analyses routinely fail to capture the sorts of “nonlinearities” that come into play once the economy starts to decelerate appreciably. Such phenomena could go a long way in explaining why, when we’ve attempted to apply the brakes in past expansions, we generally ended up skidding into the ditch.

I think that at least part of the problem relates to the fragilities that typically develop during the expansion phase of the business cycle. The Chairman has, in effect, been addressing one source of such fragility in his admonitions to bankers that they need to be more cautious. Loan losses and capital impairment, their seeds having been sown in the enthusiasms of the preceding boom, have often created credit crunches that exacerbate the multiplier-accelerator effects damping private investment. These difficulties can be especially great if banks and other financial institutions have financed a construction boom, because an overhang of supply in real estate markets--where the assets collateralizing loans are immobile and long-lived--is not easily absorbed. At this point, I’d judge that the problems in this sphere aren’t as great as they have been at some times in the past. And, if there are latent problems, they may lie this time relatively less in the commercial area and relatively more in the residential, where we haven’t had a cyclical test of the underwriting standards that have made mortgage credit more accessible in the past decade.

I am still less sanguine about another asset market--that for corporate equities. Share prices clearly are susceptible to exaggerated swings as the balance of greed and fear tilts in a bearish direction--with marked effects on the cost and availability of equity capital and on household wealth. In the current cycle, there would seem to be a risk of a particularly large decline in the market, given that, by many conventional metrics, we’ve experienced a speculative bubble of extraordinary proportions. The market-correction scenario in the Greenbook--though involving a considerable, 25 percent decline from the March peak for the Wilshire--may well understate the downside potential here. But, even if you vastly increase the dimension of the decline, our econometric model would still say you can avoid recession, if you cushion the effects by backing off on your tightening.

Is this realistic? Maybe yes, maybe no. I certainly wouldn't question your nimbleness, but it could be challenging to gauge what is required to avoid an undue weakening of demand and yet avoid igniting another bull run. I personally am concerned, moreover, that consumer sentiment could prove volatile. This hasn't been much in evidence in the past couple of months, perhaps because the NASDAQ slide reversed gains that were enjoyed only briefly--and perhaps mainly by investors who were riding what they must have recognized was a wild wave. But I suspect that in recent years many households have been lulled into complacency about the adequacy of their savings by the run-up in share prices and that a major shrinkage of their nest eggs would severely dent their spirits. On the other hand, though, it isn't clear that we have seen outsized wealth effects on the up side as consumers' spirits have soared, so perhaps we need not be greatly concerned about the consequences on the down side.

I'd be remiss if I did not mention one other likely reason that soft landings have proven elusive. That is that, in part because of the lags in the effects of interest rate increases and our foggy crystal balls, we probably have had a tendency to tighten too much or too long. This undoubtedly would be an argument of those who would caution against more aggressive tightening action right now, with the effects of your first five policy actions still in the pipeline. However, I would raise the question whether that pipeline has not sprung a leak, draining off some of the restraint; I refer, of course, to the considerable further increase in share prices, on net, since you began your sequence.

This, to be sure, is not a comprehensive assessment of the risks that lie ahead. Vince noted the potential ramifications of our external imbalance. The interactions of all these forces could be complex and certainly are impossible to foresee. However, I don't think this adds up to a prescription of hesitation in the move toward greater monetary restraint. Indeed, one might argue that the pattern of too much, too long that I noted a moment ago has been a byproduct of doing too little early enough. The bottom line judgment I would offer is that, if anything, the news of the intermeeting period has highlighted the basic imbalances in the economy that probably will become more serious and more difficult to deal with if aggregate demand is not reined in at least moderately. And I don't think you can depend on the markets to do the work without your participation. That concludes our remarks, Mr. Chairman.

CHAIRMAN GREENSPAN. Questions for Mike or Vince?

MR. HOENIG. Mike, I'm struck by your last comment that we've perhaps tended to do too much late in the game because we did too little in the early stages. But does doing too little in the early stages justify in anyone's mind doing too much later?

MR. PRELL. It certainly wouldn't justify it, but one would hope that by getting ahead of the curve, to use the parlance--

MR. HOENIG. But if we are behind the curve, do we want to overreact in an attempt to correct that?

MR. PRELL. Presumably you never want to overreact.

MR. HOENIG. Right. I like that answer.

MR. PRELL. But as one perhaps gets frustrated in not seeing the desired response and as the problem seems to be getting worse because inflation lags the changes in the output gap, there is probably always going to be a risk of overstaying on the tight side.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Mike, I have a question about the simulations. If you carried these out to 2002 or 2003 and beyond--maybe you did or maybe you didn't--what would you get for inflation? I'm particularly interested in the baseline case and its flat funds rate scenario after this year.

MR. PRELL. We get inflation continuing on up. This is all finely calibrated through our judgmental forecast and then what the model produces, which is this upward trend in inflation. Part of the problem in that scenario is that the funds rate is stable at 7-1/4 percent and thus it begins to decline in real terms. In essence you begin to have less and less restraint and you're accommodating an acceleration of inflation. It so happens that running the exercise with our model and holding the funds rate steady at 8 percent avoids that problem

and you have a stable inflation path. In fact, a couple of years down the road you probably will find that the unemployment rate is drifting up above the steady state of the NAIRU and you will need to begin to ease policy in order to avoid overshooting on the disinflation. But how far you want to go down this road depends in part on where you want to end up. If you want to end up at 2 percent core PCE inflation, then this 8 percent scenario might fit the bill. If you want to get inflation down closer to what we think is true price stability, that tighter scenario and related output gap may need to be there for a while.

MR. STERN. What I am trying to get a handle on is how much more inflation we ought to anticipate in another year or two in the baseline case and the flat funds rate. I certainly believe you that the tighter policy may produce the kind of reaction you're talking about. But in those other two scenarios--

MR. PRELL. Well, I'll confess that we did not extend the flat funds rate scenario to the out years, but I certainly anticipate that it would be a much worse looking picture. The extension of the 7-1/4 percent funds rate in our model extrapolation--and this involves some extrapolation of the baseline forecast to begin with--results in inflation by 2002 moving into the 3 percent area on core PCE.

MR. STERN. Three percent? Okay.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. I have a question about the international accounts, the foreign dollar claims. How do we get a sense of the magnitudes here? I understand the uneasiness about this. But what fraction of Dutch assets, for example, are now claims on the United States? Or how do these fractions compare with some of these models of optimal international portfolio diversification? I know they may give you some guidance of how far off we--

MR. REINHART. The models of optimal international portfolio diversification would suggest that there is a long way to run because they conclude that there is a significant home bias. That is, households in a domestic country hold far too much of their wealth in their own currency and not enough international assets. So, from that perspective, both they and we should be accumulating more international assets relatively. As a rough approximation the answer you get is that the assets a country's residents should hold ought to be something on the order of their share of world GDP.

CHAIRMAN GREENSPAN. Shouldn't that depend on expectations regarding exchange rates? With a fixed exchange rate structure, then holdings of international assets gravitate toward the distribution of a country's foreign trade. But if there are currency risks, foreign asset holdings would tend to fall quite short of such a distribution.

MR. REINHART. Sure. I was talking about an environment in which there was an equality of risk-adjusted returns worldwide. In that case the international portfolio diversification of households would move toward--

CHAIRMAN GREENSPAN. Foreign currency assets?

MR. REINHART. Right. It would move toward those shares. But the fact is that households hold fewer foreign assets than our models think they should. However, countering that is a long historical property that they don't hold those assets, and we are testing the ranges of reserve shares.

Now to answer the factual part of your question, we don't have international flow of funds accounts that would give us information about the levels of foreign assets and their distributions across countries. We can get it from the perspective of the United States; in fact

there is a new survey coming out on that. But I can't answer your question for the Belgian dentist or the Dutch broker.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. Mike, I was also interested in your comment about “too little, too late” or “too much, too long” from a couple of different perspectives. Your 8 percent funds rate scenario as compared with the baseline case of 7-1/4 percent would seem to provide a range of options. The 7-1/4 percent would give us some protection against the downward phase of the cycle you talked about, where we are unable to factor in what will really happen because of the nonlinearities that are involved when the economy is slowing down. I'm just asking whether I'm interpreting your comments correctly in terms of the differences between your baseline case and the 8 percent funds rate scenario. With the 8 percent alternative your model doesn't produce a recession, but then again we don't know how to judge some of the risks associated with the nonlinearities that arise. So am I right in assuming that at least with regard to the next couple of years, you'd say that there is some kind of cushion between the baseline and the tighter funds policy alternative that would absorb some of the risk of the nonlinearities?

MR. PRELL. First, I would caution against taking any of these numbers as seriously as we seem to be doing here.

MS. MINEHAN. Yes.

MR. PRELL. That's a caveat I would issue about these long-run simulations, let alone the shorter-run forecast. I guess I'd say that as we assess the trends in aggregate demand and take as given certain features of the external environment, we don't see 7-1/4 percent as doing the job of capping inflation. Now, if you were trying to figure out what strategy to

adopt if you had to make a decision today on where to move the funds rate by the end of the year, I'd certainly characterize the 7-1/4 percent as a more cautious approach. That strategy lowers the risk of so sharp a deceleration in the economy that you begin to set off the momentum of these nonlinearities. But this conclusion is very speculative, and shocks could come along that would significantly alter the picture. It is a gentler policy. Whether it's kinder in the long run [Laughter] depends on how things evolve. If it merely delays what you feel is going to be needed to catch up, thus producing a more violent response, it would not be kinder in the end.

MS. MINEHAN. Coming at it another way, though, suppose we start in the next month or so to move the funds rate up as we approach that total increase of 125 basis points by the end of the year. At this point you don't consider that a description of too much, too long?

MR. PRELL. No, definitely not. That is our thesis. As for whether it is correct or not, I can't provide any guarantees.

MS. MINEHAN. But if you were going to assess the risks--

MR. PRELL. It is an installment, but we think you are going to need more installments down the road to really hold the line on inflation. Inflation will be tending to drift up as you move through the forecast horizon.

MS. MINEHAN. What is the risk that it is too little, too late?

MR. PRELL. Well, my concern--particularly in light of the developments in the last few days--is that the markets are entirely too comfortable with the policy of gradual increases in the funds rate. We may find that the stock market continues to trend upward and we do not get the negative wealth effect that we have in our forecast, but rather a neutral or

positive wealth effect. That would create an aggregate demand picture that was much less compatible with holding the line on inflation. So I would identify that risk. Vince identified the risk that at some point the dollar could have a more precipitous decline, and obviously that would exacerbate the pressures on domestic resources. I don't want to paint the picture as completely asymmetric because, as I also suggested, the market might be vulnerable to a significant reversal if the basic, positive psychology is shaken by some event. Who knows? In that case the dollar still might look like the place to be. So, there are risks on both sides.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. First of all, Mike, let me say that it really does look different from this end of the table where you used to sit! [Laughter]

MR. PRELL. Clearer!

MR. JORDAN. But if I sound a bit disoriented and confused, remember that I've only been sitting here a little over an hour, whereas you had a lot of years to absorb the vision from here!

When I look at the data in the Greenbook for the last four quarters, including the current quarter and assuming that the Greenbook forecast is correct on that quarter, I have to say that the resultant set of numbers is really extraordinary. It's not only a set of numbers that was not forecast, but one that I would consider unforecastable. One of the exercises that I like to go through to prepare for an FOMC meeting is to review how things looked a year ago to me, to the Blue Chip forecasters, and to a lot of other folks. And I reflect on what kinds of policy assumptions went into those forecasts. Sometimes I review more than a year, but certainly I try to recall how the economy looked a year earlier. In view of these numbers on real GDP for the four-quarter period through the current quarter, I was looking at some tables

the staff prepares and how they compared to those done last May. My first thought was: My gosh! The staff got it exactly right. And then I realized I was looking at a table on nominal GDP for that four-quarter period! [Laughter]

MR. PRELL. We were expecting 5 percent nominal.

MR. JORDAN. Then I picture myself in the fourth quarter of 2001, say at the December meeting, looking back and saying: My gosh! The staff got it exactly right in terms of nominal GDP, real GDP, and all of the other variables in these Greenbook tables for the six-quarter period starting in the third quarter of 2000 and running through the fourth quarter of next year. But then if I looked at where the funds rate would be--at 7-1/4 or 8 percent or something like that--and the associated other yields, I think I would be absolutely mystified. Now, I have to admit that, when I reflect on the financial markets of the last four quarters, I have a lot of unanswered questions about their consistency with the performance of the economy. Certainly the Treasury market is difficult to interpret. Let's say that the markets have it right, and what is reflected in the financial markets is that we have a transitory acceleration in nominal spending and real output and then we will glide into the staff's set of numbers in the Greenbook. In that scenario, I cannot imagine getting into the fourth quarter of 2001 and seeing the funds rate up there in the 7 percent range or more and the associated other interest rates comparably higher. In fact, I would say where rates are right now is probably consistent with this set of nominal and real GDP numbers. Your reaction?

MR. PRELL. We've made a few mistakes in the past! [Laughter] So we could be making a mistake this time. We could be making a mistake this time even if we had been perfect in the past. But in essence our judgment is that the rise in interest rates has to some extent reflected the pressures of an extraordinary expansion in aggregate demand that is in

part a product of the run-up in stock prices. And, in all likelihood, it's also partly a reflection of an adjustment to a higher potential growth rate that has come with an acceleration of productivity. As we look at what has been an accelerating pattern of economic expansion, it seems to us that we probably have not moved interest rates up enough to curb that acceleration of aggregate demand and real growth. So, we believe that we need to move rates up still further for a period in order to rein in this expansion somewhat and restore a balance between aggregate supply and demand. Whether rates will have to go as high as we forecast and remain that high is difficult to say. Fiscal policy developments could play a role in determining that. But this forecast is our best shot. And it's not one that is grossly at odds with what the market seems to be anticipating, with one exception. And that is that we are looking for a significant further rise in nominal bond yields because we don't think the market really has built in this upward trend in inflation that we believe is commencing. So as we look forward, we expect there will be a need for a high real interest rate, and we anticipate that inflation expectations are going to be deteriorating somewhat in the environment that we are forecasting.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Thank you, Mr. Chairman. Vince, beginning in 1999 and continuing through 2001 the foreign real GDP growth rates are quite strong, especially in the industrial countries. Would you characterize this primarily as a cyclical development or is there an indication that perhaps some of the "new economy" developments, which certainly have affected us over the last four or five years and have produced forecasts that were consistently too low, are at work as well?

MR. REINHART. I think a significant fraction of the higher growth for 1999 and 2000 is cyclical because by our estimate there are output gaps to be worked down in many of the industrial countries. And the fact that foreign growth in 2001 moderates in our forecast really suggests that we couldn't find the new economy effects working as successfully abroad as has been the case in the United States. Right now there are some tentative pieces in the puzzle that suggest that productivity growth has probably picked up in Canada. And we have raised our estimate of potential output growth for that country. Rising productivity is also the case in some of the smaller European countries, particularly those that use information technology rather heavily. However, those are the smaller countries and their contribution to total foreign output is relatively modest. It won't be until we see something in the major industrial countries that we are going to see foreign economic growth above the top line of our forecast. And it's in the major industrial countries where the structural problems seem most severe. Whether those problems will actually be a drag on activity, say, in Japan, or just impede the progress necessary toward taking full advantage of the new economy, is hard to say.

MR. PARRY. Let me just add a footnote. You made the point that we see foreign growth slowing; that happened as well in our own forecasts for the U.S. economy. So it may be that you would not find signs of the new economy in the macro forecast. But looking at different sectors in the economy could result in a forecast that is more nontraditional in nature. I don't disagree with you, incidentally, about the limited importance of the new economy element, certainly in Europe. But it is something that could become a factor at some point.

MR. REINHART. And one reason we've been looking for it harder in the last couple of months is that, in fact, equity prices have risen so much in many parts of Europe.

And the better performance of IT-sector equities relative to the major indexes also has some precedent in the U.S. data.

MR. PARRY. Thank you.

CHAIRMAN GREENSPAN. In a country like Finland, which is presumed to have a major rise in and a disproportionate share of high-tech usage, do we see it in their output per hour figures?

MR. REINHART. That was one of the small countries in Europe that I had in mind. There is an OECD study that looks at a few of the peripheral countries and argues that the trend in output per hour has picked up in them.

CHAIRMAN GREENSPAN. What would be the order of magnitude?

MR. REINHART. Right now it is relatively modest. I don't have the numbers in front of me, but I think it is on the order of 1/2 percentage point.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. Mike, I wanted to ask you about the wealth effect assumptions in the Greenbook. I am particularly interested in what you are assuming about the carryover effect of the increases in the stock market that we saw in 1999 and in previous years. You are assuming a flat stock market in the baseline and you indicated that there would be a small negative in terms of the wealth effect in the second half of this year and a negative of about 1/2 point in 2001. I'm just wondering how you are factoring in the impact of the increase in the stock market in earlier years in these assumptions.

MR. PRELL. Well, that is all folded in there. That is a reflection of the distributed lag of those effects.

MR. MOSKOW. How powerful are the increases in previous years on this year's consumption?

MR. PRELL. Were it not for those lagged effects we'd have a negative effect this year on balance. But we still have a good part of the effect of the 1999 rise in particular impacting the economy this year.

MR. MOSKOW. Why are they turning negative then?

MR. PRELL. The stable stock market means that the ratio of wealth to income is falling. And that's the indicator on which one would base an anticipated drag on consumption.

MR. REINHART. What's involved is the distinction between the level and the growth of consumption. There will no longer be an impetus from wealth adding to or boosting consumption growth, although the earlier wealth effect will still be supporting the level of consumption. So just from the fact that the stock market levels out, we no longer get that kick in consumption.

MR. MOSKOW. I understand that, but I would have thought the impact of the previous years would have had a larger impact this year because I know the effects don't occur just within that one year.

MR. PRELL. In the first half of this year we are getting a substantial effect. But at this point it is decaying and in the second half of this year it will have disappeared. We expect to get a very large proportion of the effect within the first year and a half, and it diminishes after that.

MR. MOSKOW. What was the effect in the first half of this year?

MR. PRELL. Roughly a percentage point.

MR. STOCKTON. We got over a percentage point in the first quarter and then, in our forecast, it slips down considerably in the second quarter. So, we have a little over 1/2 percentage point effect on the PCE growth in the first half, which trails off to about roughly down 0.1 or 0.2 percentage point in the second half. Part of the reason, too, is that the stock market actually has, on balance, flattened out now. It has had its ups and downs, but the Wilshire 5000 has not been rising as rapidly as the NASDAQ obviously was earlier. So with that lag distribution, we are starting to see the positive wealth effect really peter out, even though we do have considerable lags in that model that are important.

MR. MOSKOW. Thank you.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. On page 9 in Part I of the Greenbook is a paragraph labeled "Prospects for the supply side of the economy and inflation." It's nice to see the supply side covered there. The first sentence says: "The expansion of aggregate supply has been substantial, but nowhere near enough to match the advance of demand." I'm not sure what that means. Presumably when you look at the economy you are sort of observing the intersection of supply and demand and both are advancing. Does your sentence just mean that as they have advanced inflation has gone up a little? Is that the evidence on which you base that statement?

MR. PRELL. No, basically it's pointing to levels of resource utilization. Whether we look at the unemployment rate or industrial capacity utilization, in both cases the level of utilization has been rising. So, by definition in essence, the growth of aggregate supply has been less than the growth of aggregate demand.

MR. MCTEER. It looks to me as if you've said that the growth was the same but we are just running out of potential for further growth in supply or something like that.

MR. PRELL I guess I'm more comfortable putting it the way I did. And as you noted, one could also point to evidence on the wage and price side that is confirming this increasing pressure.

CHAIRMAN GREENSPAN. Does anybody else have a question or comment? Would somebody like to start the discussion? President Broaddus.

MR. BROADDUS. Mr. Chairman, the information we have this month from our District is not very different from what it has been for the last several meetings. We've seen a few signs of a possible moderation in consumer spending. The pace of car sales has decelerated in several parts of the District, following the national pattern to some extent. We've also had a few reports of less robust housing construction and sales most recently, especially in the Carolinas. And we've heard some anecdotal reports that higher mortgage rates are finally beginning to bite. But as Mike said, the evidence is still pretty ambiguous. Such comments are not heard that frequently and our sense is that residential activity is still remarkably strong across our region as a whole. Indeed, broadly speaking, our District economy across all sectors is clearly very strong. We had some signs a couple of months ago that manufacturing activity might be decelerating a bit, but our most recent survey suggests that factory activity has revived. We've even had a few positive comments from the textile industry, something we haven't heard for a long time. Just to cite a little additional information, the Washington metropolitan area can only be described as booming, and that includes the District of Columbia as well as the outlying suburbs. Both commercial and residential real estate are very strong here. And finally, labor markets remain exceptionally

tight throughout our District. That is obviously an old story, but in my experience it's increasingly becoming a preoccupation with our business contacts, directors, and others. And we do hear more reports of wage increases.

Now, when I look at the national economy, the question I ask myself is this: Is there anything in the recent information on the economy that suggests we ought to back off from our current strategy of incrementally increasing the real federal funds rate until we get some sense that the growth of aggregate demand is coming back into line with reasonable estimates of the sustainable growth in supply? I just don't see any such information at this point. On the contrary, the most recent data on prices and on wages in particular seem to me to underscore the need for continued increases in real interest rates to bring the aggregate economy back into better balance. We got a new CPI number this morning. Mike, you mentioned the 12-month change in the core CPI was 2.2 percent. I had called Richmond and my staff said the number was 2.3 percent for the 12-month period ending in April. It may have been 2-1/4 percent and the difference is in the rounding. In any event, it is approaching a rate that is 1/2 point higher than it was just a few months ago. So it seems to me that there is at least some evidence that we are at last experiencing some increase in actual inflation. And the staff's projection that the upward trend is going to persist strikes me as both reasonable and disturbing.

Wage pressures also appear to be picking up; that shouldn't be surprising with labor markets as tight as they are. The ECI rose very sharply in the first quarter. The staff has now revised upward its projection for that measure, which again seems reasonable to me. The Greenbook observed that the various compensation measures we use may not be capturing the full impact of nontraditional actions that business firms are now taking--signing bonuses,

retention bonuses, and the like--to attract and retain workers. We don't really know how these new actions may be affecting both the growth of overall labor costs and pricing behavior by firms. I would just add that that observation is very consistent with many of the comments we've heard from our directors and other business contacts.

What bothers me most, though, is the evidence--or at least what I see as evidence--of higher inflation expectations. We see it to some extent in the household survey data. Long-term interest rates are now rising. To me a reasonable guess is that at least some of that reflects an increase in inflation expectations. The spread between the yield on regular 10-year Treasury bonds and 10-year TIPS has increased significantly since our last meeting. I know one can't read inflation expectation changes point-for-point from changes in that spread, but I think the kind of increase we've had recently is probably signaling that expectations of future inflation have risen at least to some extent and maybe materially. I recognize that temporary factors can explain some of these developments. But it also seems perfectly plausible to me that they are being driven to a large extent by our persistent aggregate demand/supply imbalance in the context of ever-tighter resource constraints, and that real interest rates need to continue to rise to contain inflation going forward. That strikes me as the most straightforward interpretation of the most recent information we've seen. And for me at least, the main policy imperative facing us now is to be sure that real interest rates continue to increase. I would add that this feeling on my part is hardly diminished by Mike Prell's comments at the end of his statement, which I thought were very powerful. Relevant to your comments, Tom, it seems to me that what we need to do is to avoid getting ourselves into a position where we have to react strongly and thus open ourselves up to the charge of overreacting.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you very much, Mr. Chairman. Growth in New England remains remarkably strong. Employment continues to grow at a rapid rate, just below the pace of the nation. And unemployment rates for the region as a whole, as well as for three of the District's states, are at all-time lows. Reflecting this and in some ways echoing Al Broaddus's comments, it is just not possible to have a conversation about local economic conditions anywhere in the District without discussing the near impossibility of finding labor. Whether the need is for high-tech personnel or decidedly low-tech blue-collar entry level staff, these positions are harder to fill and they are more expensive than previously. Local firms, large and small, continue to be inventive about making capital investments that replace labor and about using a wide variety of techniques intended to moderate the cost of hiring and retaining staff. These include the use of temporary help and outsourcing, even to foreign suppliers. But increasingly these techniques are not enough. And our contacts report that holding the line on wages--and on benefit costs particularly--is really becoming a losing battle. Adding to this is the fact that non-personnel costs are also rising, especially if production inputs are oil-based. Manufacturers using or producing plastic seem particularly hard hit. So, while widespread price increases still are not the norm, such increases seem to be much more feasible and closer to happening than in prior months.

Looking to the national scene, incoming data since our last meeting once again suggest that for most, if not all, of this period growth has been not only stronger than expected but has been accelerating. Moreover, the expected pickup in inflation seems to have begun in earnest whether one looks at actual price data for goods and services, at wage costs and especially benefit costs, or at expectations. I think it's important, however, to take a measured

response to this uptick in prices. After all, the Greenbook as well as our own forecasts have been suggesting for some time now that the rate of price increase would accelerate. That's why we favored a tighter monetary policy. Moreover, we may be seeing the beginning of a slowdown, as evidenced by the volatile and downward trend of the stock market, rising capital and debt costs, and the housing and retail sales data.

Our forecast, however, like the Greenbook, suggests that in the absence of sizable further tightening, this slowdown--if in fact it is real and not the "head fake" that is mentioned in the Greenbook--will not be enough to forestall deepening price problems. We may or may not be "behind the curve," as some would say. But I do think it is necessary now to be very focused on a measured forward direction of policy.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. The Seventh District economy continues to perform quite well, but the tone of reports from our contacts has changed recently, as several noted some slowing in activity. A growing number of firms indicated increasing cost pressures and some new reports emerged related to tight labor markets.

In terms of real activity, our housing sector still seems to be doing well but we are starting to hear more stories of slowing. Reports on light vehicle sales in the District have been mixed, with some of our directors reporting continued strength, particularly in luxury models, but dealers in several metro areas reporting weak sales and reduced showroom traffic. Two of the Big Three auto makers told us late last week that they were sensing some slowing in light vehicle sales on a national basis, although expected sales levels are still quite high. A large national retailer headquartered in our District told me his company had seen no signs that sales were slowing nationally this month. However, some retailers told us that their sales

in the Midwest last month were not as strong as elsewhere in the nation, perhaps due to the weather.

Purchasing managers' survey results from Chicago, Detroit, and Milwaukee all show continued expansion in April, but at a slightly slower pace than in March. The prices paid components from the regional PMI reports were down only slightly from five-year highs reached in March, suggesting that District firms are facing increased cost pressures. Indeed, several large manufacturing firms who have a history of continuous cost reductions told us recently that it is becoming more and more difficult to get cost reductions from suppliers and that they face increasing price pressures on a wide variety of inputs. And our survey of Michigan retailers suggests that prices to consumers are also moving up, as the number of respondents raising their prices grew sharply in March.

Our labor markets are still tighter than the nation's. Moreover, there does not seem to be any let-up in demand for workers. Manpower's latest survey of hiring intentions set a new record: More firms than ever before in the survey's 24-year history indicated that they plan to increase employment in the third quarter, with strength across all regions of the nation as well as across all industries. That information is not going to be released publicly until May 22nd, so I ask you to please treat it confidentially.

The employment cost index for the Midwest has recently been rising faster than that for the nation as a whole. That is consistent with the findings of some research our staff has done, which confirms that relative unemployment rates continue to be useful predictors of regional differences in wage growth. In some cases tight labor markets are holding back business expansion. For example, one auto supplier recently closed a Michigan plant because there weren't enough workers available to staff it. And 70 percent of the respondents to our

latest survey of Michigan retailers said customer service was suffering because of worker shortages.

On the whole, most firms have been more successful in expanding employment than the very low unemployment rates would suggest. Increasingly we have been hearing anecdotal reports that unmeasured immigration may be playing a significant role in this employment growth, as you have suggested in recent meetings, Mr. Chairman. Of course, immigrants have long had a significant presence in large cities like Chicago, but official statistics suggest that the immigrant share of the labor force in other parts of the District is neither high nor increasing. However, I recently visited Columbus, Indiana, a manufacturing center of about 35,000 people where Cummins Engines is located and where the unemployment rate is 1.9 percent. I heard extensive reports that the town has seen a tremendous increase in immigrants from Latin America in the last few years. It was estimated that 1,000 to 2,000 immigrants were now working in area firms. The story is similar in other small-to-medium size towns in our District. Incidentally, _____ told me that he had contacted the INS because of concerns that many immigrants were undocumented. The INS responded that they lacked the resources to investigate these cases unless they involved troublemakers. Of course, the city's employers need the immigrants to staff their plants and other facilities.

Turning to the national outlook, recent data have led us to increase our projections for growth and for inflation in 2000. Gains in employment and hours continue to be impressive and the consumption sector remained red-hot through the first quarter. Our real GDP growth path is slightly stronger than that in the Greenbook. Although consumers will eventually slow their spending pace, we are expecting less slowing in the second half of this

year than the Greenbook. The inflation data are beginning to show signs of deterioration, and our outlook for PCE inflation is roughly similar to that in the Greenbook over the next 18 months.

So, the key question at this juncture is whether the policy actions we have taken to date are sufficient to put the economy on a sustainable track. Consumer expectations continue to be quite elevated and the wealth effect from prior years' equity gains has probably not run its course. We have been waiting for a slowdown in aggregate demand for some time. Although this hope has not been realized, the increased inflationary consequences to date have been minimal. But I am not as optimistic this time around. In my view the balance of risks is clearly weighted toward higher inflation.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Thank you, Mr. Chairman. The Twelfth District economy has continued its robust expansion so far this year. California's economy remains on a strong growth path, spurred by unusually rapid gains in income and consumer spending. During the first four months of this year, employment increased at a 3-1/2 percent pace, well above last year's pace. Personal income gains were sizable last year. And data on state government revenues suggest that income growth picked up further in the first quarter of this year. Moreover, growth in consumer spending appears to be even more rapid than income growth in the state. Last year's growth rate in taxable sales was the largest since 1984. Demand for housing and commercial real estate remains very strong in California as well. For example, in the San Francisco Bay area, high-tech equity wealth has helped to push up median prices on existing homes by 25 percent during the past year. Real estate markets in the remainder of the District also have shown little or no signs of cooling.

In the District manufacturing sector moderate job losses have continued this year, but output and sales have been rising in response to improvements in export demand.

Although Boeing's employment fell further in the first quarter, the pace of job losses has slowed. And rising East Asian demand is evident in accelerated delivery schedules on some previously delayed orders. Moreover, semiconductor manufacturers have benefited from substantial improvement in worldwide demand. As one example, Intel and another maker of semiconductors plan investments totaling \$3 billion in additional manufacturing capacity in Arizona. Probably the strongest source of growth in the District recently has been the software and Internet services sector. The pace of investment in that sector likely will be reduced by the recent sharp decline in high-tech equity valuations. However, for promising investments the pool of available venture capital remains very large.

Turning to the national economy, recent data certainly have raised a red flag about inflation. First, although real GDP slowed in the first quarter, real spending--as measured by real final sales--actually picked up from the very strong fourth-quarter results. Retail sales did flatten out in April, but it's obviously too soon to conclude that consumers have downshifted their spending. Second, the further tightening of labor markets in April is not a good sign for inflation. And third and most importantly, the news on inflation itself has been worrisome. With inflation coming in on the high side in the first quarter, we now have had two straight quarters with inflation rates that were above the previously established level. The core PCE price index rose by an average of 1.9 percent in the past two quarters versus 1.3 percent over the four quarters before that. While part of this acceleration could be caused by a one-time passthrough of higher energy costs to core prices, it is also quite possible that we are beginning to see a sustained upward trend.

With regard to our own forecast, we've assumed that the funds rate will reach 6-3/4 percent by the fourth quarter of this year and that the broad stock market will remain unchanged at recent levels. Under these assumptions we expect to see a gradual slowing in activity, with real GDP growth averaging 4.6 percent in the final three quarters of this year and 3.9 percent in 2001. But labor and product markets are expected to remain tight through the end of next year and core inflation to show a gradual upward trend, despite an assumed rapid growth rate in productivity. The core PCE price index is projected to average 2.1 percent this year and 2.2 percent in 2001. Our inflation forecast is up only slightly from where it had been for some time. The really important new development is that we've seen a pickup in actual inflation in the past two quarters that might be the beginning of a new trend. In any event, it is now clear that the previously established downward trend has ended at a level above price stability. Overall, developments since our last meeting have certainly raised my concerns about inflation significantly. Thank you.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Thank you, Mr. Chairman. Overall economic conditions in our Southeast region are little changed since March. Growth continues to be moderately strong. We can still find only scant evidence in either the regional data or anecdotal reports of any significant slowing as a result of our earlier tightening moves. Consistent with the national data, residential construction in our area is now showing some signs that rising interest rates are beginning to bite. But even in that sector there are pockets of continuing strength. In contrast, nonresidential construction might actually be picking up somewhat. We see no signs yet of obvious overbuilding. In Atlanta 5 million square feet of new space were absorbed in 1999 and reportedly another 2 million square feet have already been absorbed in 2000.

Tourism is quite strong, with good advance bookings. Exports from our region are up from the early months of the year, led by a pickup in demand from Canada and Mexico. And exports to Brazil from Florida, that state's top export market, were up 7 percent from last year, as Brazil emerges from its slump.

Labor markets continue to tell the most compelling story of resource constraints. They now have to be characterized as extremely tight. Regional employment expanded another 0.7 percent in the first quarter of 2000, matching the pace of the fourth quarter of last year. And a recent survey that I saw listed Atlanta as the fastest growing large metropolitan area in the nation. Those ever-tighter labor markets are fueling an endless string of "have you heard" anecdotal stories about how employers are coping or trying to cope. Some of the quirkiest include a raffle for a new car for those employees working extraordinary amounts of overtime, concierge services, including laundry drop-offs and pickups, and even pet sitting--a new one that someone mentioned to me last week. At our directors meeting last Friday, one director reported that his _____ had been offered and had accepted a \$250,000 signing bonus to re-up for an additional 10 years. Even the government is getting into the act! Underscoring a point that Al Broaddus made, I too am hearing more people suggest that these nontraditional forms of compensation and concessions are not being picked up in the traditional compensation measures.

At the national level, we see the Greenbook as having done a particularly good job this time in capturing the current situation. The pace of economic activity remains quite strong on almost all fronts and inflationary pressures are now more obvious. Consumer spending not only continues to be strong but, given high levels of confidence, consumers appear poised to continue to spend at a good pace. Investment spending bounced back markedly in the first

quarter; and though it will surely settle back to some less dramatic rate of growth, the signs point to considerable strength. The generally positive picture among our trading partners suggests growing demand from the foreign sector. And the apparently even stronger-than-thought federal tax revenues would seem to encourage higher federal spending. So, it is hard for me to see where moderation in demand might come from.

I think the inflation outlook has clearly deteriorated. For some time now we have observed a number of developments that appear to be creating conditions in which inflationary pressures could likely begin to build, and we wisely have been at least modestly preemptive in trying to stay ahead of those developments. Now I think most of us, including me, would say that we are seeing an upward drift in measured inflation, whatever one's preferred index. And almost all forecasts, including the Greenbook, our own Bank simulations, and those of most private forecasters, envision a further upward drift over coming quarters.

Perhaps the most troubling of all to me is the apparent deterioration in inflation expectations. We have worked too hard and others in the economy have paid too high a price in the past to let our collective commitment and credibility be eroded. While there are some risks in both directions, I believe the time has come to be a bit more aggressive in our policy response. I think the economy has enough strength and enough momentum to absorb such a nudge without great risks. In a vein similar to Jerry Jordan's question to Mike Prell earlier, our most recent modeling work suggests that if we remain appropriately preemptive, we may not have to raise rates quite as high as otherwise nor hold them at relatively high levels for quite so long. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. First Vice President Stone.

MR. STONE. Thank you, Mr. Chairman. The Third District's economy is continuing to grow, with accelerating employment growth and a declining unemployment rate, which just brings us to about the national average. Recently we completed a series of meetings with bankers and businesspeople throughout our District, and the message is the same. They are all complaining about the difficulty of finding qualified workers. Manufacturing activity has continued to expand, based on our May business outlook survey, which will not be publicly released until this Thursday. Although new orders and shipments were not as strong as in the previous month, the levels reported in May remain solidly positive and are not much different than earlier in the year.

Retailers in our District reported moderate year-over-year gains in sales in March and April and slightly lower gains than earlier in the year. Auto dealers continue to report rapid sales, which they attribute to manufacturers' incentives and higher consumer incomes. Residential housing activity has continued at quite a brisk pace overall even though some builders are reporting a modest slowdown from the pace earlier this year. Bankers, however, are expecting a slowdown in housing activity during the next six months. Nonresidential construction is not as strong as it was a year ago, although it picked up somewhat in Pennsylvania and Delaware in the first part of this year. Central Pennsylvania, for instance, has had a significant increase in construction of materials handling and distribution facilities. Real estate contacts are still quite optimistic that nonresidential construction will remain fairly strong.

Turning to wages and prices in the District, many businesses report paying higher wages because of the tight labor markets. The frequency of such reports has been rising over time. Businesses also report paying higher import prices. Retailers are talking more about

cost pressures and a desire to raise prices than they were last year. And our business outlook survey this month is again recording a very high index of prices paid by manufacturers. That survey's index of prices received by manufacturers, however, is noticeably lower this month than it was in April, suggesting that our region's manufacturers are still having difficulty charging higher prices to their customers.

In general, recent business sentiment is not as optimistic about the outlook as it was a few months ago. Even though we continue to hear impressive anecdotal stories about farmers and businesses coming up with innovative ideas to improve productivity, business people now sound more cautious. They don't expect as much economic growth six months from now and they are also expressing more concern about rising inflation.

Turning to the national scene, aggregate demand is still growing faster than supply despite impressive year-to-year gains in productivity. Consumer spending in particular has shown little sign of slowing to a more sustainable pace. Although our staff's outlook is not as pessimistic as the Greenbook in terms of its inflation projections, we agree that it is unlikely that demand will slow sufficiently to forestall further increases in inflationary pressures without additional Committee action.

Now, how much the Committee will ultimately need to move will depend on whether or not we feel we are behind the curve. In that regard, I take some comfort from the fact that so far there has been little upward movement in survey measures of long-term expected inflation. Although expectations of inflation over the next year have generally risen in recent months, expectations of longer-run inflation have not. For instance, our Reserve Bank's most recent survey of professional forecasters, which will be publicly released next Monday, shows that the median of expected consumer price inflation over the next ten years

remained at 2-1/2 percent. That's the same reading as in the first quarter and in fact about the same reading as those over the past two years. Similarly, the Michigan survey's measure of expected inflation over the next five to ten years remains unchanged this past month at 2.8 percent. And Michigan's measure of expected long-run inflation has not changed a great deal during the past year or so. The stability of these measures of long-run expected inflation suggests that people expect the FOMC to keep inflation under control over the long run, which leads me to conclude that we still have the opportunity to take action to prevent recent higher monthly inflation numbers from becoming embedded in expectations. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Mr. Chairman, in the Eighth District the stories that I hear as I wander around the District are very much the same as they have been for the last six months or so. I do get a sense that two things are perhaps a little different. One is that I hear more reports of what people are touting as a one-shot wage catch-up. In other words, employers are not anticipating ongoing increases of a larger magnitude but are trying to catch up to the market because they have a sense that they have fallen behind in one area or another. I also believe that more frequent reviews of compensation are taking place. Firms that traditionally in recent years might have reviewed compensation and made adjustments once a year are now doing it more frequently, reviewing every six months, for example.

My UPS and FedEx contacts suggest a significant--I don't want to exaggerate--but definite increase in the pressures they are seeing. They see greater pressures in the labor market, greater pressures in U.S. demand, and greater levels of activity abroad, and in all three areas the pressures are above what they had anticipated.

On the labor market side, _____ said they are “struggling” in his words and are going to be adding incentives to attract workers. They are short a substantial number of workers, particularly at _____. They have missed some of their delivery times because they don’t have enough manpower. He said _____ and he characterized the strains as clearly more intense than they were a year ago.

_____ says that his company is increasing entry level pay by 7 to 10 percent plus paying retention bonuses. All _____ operations are under very substantial pressure. _____ lowered the minimum scores on its basic skills test for qualifying new blue-collar workers. My contact also noted that his firm is expecting health care costs to be up 7 to 8 percent this year and 10 to 11 percent next year. And he says that in talking to CFOs around the country he has the sense that others expect much the same. This includes all the contacts he talks with on a regular basis.

In terms of demand pressures, my UPS contact says that domestic volume is coming in much stronger than anticipated. In his words, UPS is experiencing “just unbelievable domestic demand.” Activity abroad is clearly very strong and my contact says that UPS now expects the volume in Europe in 2001 to equal the volume previously anticipated for 2004. That is, UPS has pulled forward three years its growth forecast for Europe. Carriers are absolutely maxed out at capacity on the Asia to U.S. routes and the firm is searching for more aircraft to expand capacity.

Another interesting note from my UPS contact was that his firm and others in the air transportation business are expecting severe problems this summer. That, of course, is the peak period for travel and there are disruptions because of thunderstorms and so forth. But

the expectation is that there will be substantial strains on infrastructure in the air transportation business in the United States.

Let me make one comment on money growth, a topic that seems to have disappeared from our discussions. I've looked at the data and I believe that money growth has not declined by anywhere near the extent we have seen in other recent periods of monetary tightening. I will use 12-month growth rates to illustrate my point. Looking back to early 1989, after a period of monetary tightening that started in 1987, 12-month M2 growth was down to about 3 percent and MZM growth was at about -2 percent. By early 1995, M2 growth was below 1 percent and MZM growth was about -3 percent. Currently, M2 growth is in the 5 to 6 percent range on a 12-month basis and MZM growth is 7 to 8 percent. I have the very distinct sense that despite the increases in interest rates, we have just barely stayed ahead of the demand pressures. There has been no real restriction of monetary policy taking place except possibly around the edges of the housing industry. And, of course, that would be consistent with the numbers we are seeing on output. There is no real restraint in place as yet. Thank you.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. The Ninth District economy remains very strong for the most part and, if anything, we've seen an intensification of existing trends. Employment gains have been sizable. At the same time, people report that it has become even harder to find prospective employees across the skills spectrum. Help wanted signs proliferate virtually wherever one goes. Discretionary spending continues strong. The most recent anecdote of this has to do with activity in the second home market in the resorts and retirement areas in the District, which are clearly thriving. Existing homes tend to be selling

very rapidly throughout the District at rising prices, and inventories of homes for sale are low. We are also seeing some improvement in the natural resource industries, including mining and agriculture.

On the other side of the coin, I am hearing of some signs that construction financing is getting harder to find for both residential and commercial construction. I take that to mean that rates have gone up for those kinds of deals or that in some cases people are getting turned away. And at least one of the large developers based in our District has indicated that his company is taking a much more cautious stance now and is cutting back on activities in some of the hot markets in which it has been operating around the country.

There has also been some anxiety throughout the District about what might happen at this meeting. That anxiety is hard to characterize. It ranges from people who are afraid we will do too much to people who fear we will do too little. So, there is no telling where the right button may be as far as that audience is concerned.

At the national level, I think prospects for real economic growth continue to look good. The incoming data suggest that to me; the Greenbook forecast suggests that; and our own model forecast, which is a bit more conservative than the Greenbook, still has very acceptable real growth. On the inflation outlook, I continue to be uncertain, perhaps even more uncertain than usual. I, too, have been watching the incoming data and listening to talk about pressures here and there. Obviously, taken at face value, those developments all raise concerns. On the other hand, we have been doing some serious empirical work on that issue, and that work suggests very modest increases in inflation from here on out. I will defer further comments on that perhaps until later in the meeting.

Finally, I think there is a chance that we may be seeing something significant going on in the stock market. Dave Stockton commented on the flattening of the Wilshire 5000. Obviously, some of the air has gone out of the NASDAQ. That means the IPO market is a lot less receptive than it was a couple of months ago, and that seems to me a potentially significant development if it persists. I have no conviction about whether it will or won't. Thank you.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Thank you, Mr. Chairman. The Second District economy grew at an exceptional pace in the first quarter, but there are scattered signs that growth is moderating in the current quarter. Price and wage pressures persist, though there are still no clear signs of a broad-based acceleration in consumer prices. Employment grew at a brisk pace in the first quarter despite persistent losses in the manufacturing sector. Unemployment rates continue to reach new cyclical lows. An early May heat wave appears to have buoyed retail sales in recent weeks following a sluggish March and April. But it's too early to gauge the monthly performance. Persistent tightness in both the residential and commercial real estate markets has pushed up rents and selling prices throughout the New York City area and has spurred increased construction and development. Purchasing managers indicate that growth in the region's manufacturing sector moderated in April from its vigorous first-quarter pace while price pressures persisted. And finally, banks report stronger demand for consumer loans and commercial mortgages but weaker demand for home mortgages. Banks also indicate further tightening in credit standards and continued improvement in delinquency rates. So, all of the speeches that we have been giving for bankers to be prudent may just be having some effect.

We believe that recent data make it even clearer that reducing the imbalance between the unsustainable growth in demand and the capacity, though increasing, to produce goods and services is essential. In addition to the data, anecdotal reports of wage and price pressures are becoming much more widespread and, therefore, those pressures will show up in the data even if with some delay. An increased pace of monetary tightening is needed for purely domestic reasons. I don't think our task will be easy. We have all been putting a great deal of emphasis on the wealth effect; it does have the advantage of being something that we can measure and calculate. But I think something quite different could show up and make our task even harder as the measurable aspect of the wealth effect diminishes. The issue is: Are we really in a different psychological climate after nine full years of an economic expansion and the lowest unemployment rate since 1970? Are we not in a period where Americans, whether or not they own stocks directly or indirectly, are so absolutely convinced that this wonderful economy will continue that reining in demand will be considerably more difficult than we are now predicting it to be? In other words, our task could be even greater than we expect.

I think the reasons for tightening domestically are very clear, but I am increasingly concerned about the international situation, especially in the emerging market countries. The situation in Indonesia has worsened again. Thailand is doing less well. Nobody knows for sure what could be involved in the suicide of the man who managed the very large foreign exchange reserves of China. Korea's very rapid recovery, a pure V-shaped one, has stymied much necessary structural reform. In our own hemisphere, Venezuela and Colombia have serious political problems that are spilling over into the economic arena and Peru has also slipped, with a real question on the forthcoming election. The severe drift in sub-Saharan

Africa in every aspect--political, economic, and social--has now carried itself into South Africa, dramatized by the very severe weakening of its currency. So, I think this rather disturbing background, which at least compensates for some modest improvement possibly in Japan and in continental Europe, puts even greater urgency on the need for us to reduce the imbalances in our own economy. I think it is very important as the world situation gets worse that we get our own situation as shipshape as possible as soon as possible. Thank you.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. Some members of the Committee have discussed our monetary policy in terms of real interest rates--that if productivity shocks raise real interest rates, we must raise nominal interest rates a like amount to avoid flooding the economy with liquidity. While I cannot quarrel with this argument qualitatively, as a quantitative matter I think this line of thinking can mislead us. If we follow this line, as I work it out we have already raised nominal interest rates more than is necessary to contain inflation. Since I don't believe that, let me argue against that particular way of rationalizing tighter monetary policy.

To see what the real interest rate reasoning suggests, one needs a model of how productivity shocks affect long-run real interest rates. It is a bit complicated to work that out. And since Governor Meyer and I are both getting a little old to solve equilibrium growth models, we farmed out a request to the staff to investigate the matter. The memo the staff prepared in response showed that in a closed economy in long-run equilibrium there is indeed a relationship in theory. The most familiar case is where consumers are farsighted and rational and can anticipate future income growth. In these circumstances consumption is sensitive both to real interest rates and expected growth rates; and in the long run real interest

rates do in fact rise one-for-one with the expected growth rates. The rationality assumptions in such a case are strong. The memo also worked out the model with more simple-minded consumers following either a Keynesian consumption function or that function augmented with a net worth term. In these cases consumption is relatively inelastic with respect to interest rates but the growth shock shifts up investment demand and still raises interest rates, this time slightly more than one-for-one, though in these cases the outcomes depend on empirically estimated parameters.

While these results seem clear enough, they are long run and assume a closed economy. As for the long run, it does take a long time to establish these equilibria, perhaps a decade or more. There could be many dynamic movements upward or downward in the meantime. In an open economy, equilibrium real interest rates have to be the same around the world. Suppose the productivity shock is not shared around the world, as by and large it does not seem to be currently. In that case, the United States will just import capital and see its own real interest rate eventually driven back to the relatively fixed world level, unless the United States is important enough to raise interest rates throughout the whole world. The result is much less change in domestic real interest rates than in the closed economy case--indeed, perhaps no change at all and a big importation of capital.

For what it is worth, actual data seem more consistent with the open economy scenario with the importation of capital that we have talked about often in these meetings. The behavior of current account deficits without the depreciation of the dollar is perfectly consistent with the productivity shock occurring mainly in the United States. On the rate side, since the beginning of the productivity shock the TIP rate has gone up by only about 40 basis points, much less than we would be predicting in the closed economy model. Some measures

of inflation-corrected interest rates have changed more, but I think that is because the nominal part of the Fisher equation has responded more than the lagged inflation part of the equation.

That's Irving Fisher! [Laughter]

The point of going into all of this is a negative one. As I said above, I don't think the real interest rate link is a good line of reasoning for us to use in our present deliberations. Whatever the case in equilibrium closed economy models, the Committee is confronted with an earlier challenge: that of stabilizing inflation. If we tried to justify our action in long-run terms, some theorist out there would find us out and blow the whistle, especially since we have already raised nominal interest rates more than would be predicted by these theoretical conditions. I think we should instead focus on the narrower short-term goal of stabilizing inflation, letting nominal and real interest rates eventually find their proper long-term levels.

This line of thinking leads me back to the inflation targeting approach I have trumpeted for the past few meetings and one that you are probably getting sick of hearing about. From this point of view, we want to keep the inflation rate stable and we should just do whatever it takes to achieve that. In this regard, I would note that the situation has worsened in the last month because inflation may actually be beginning to increase, implying that our inflation fighting policies will have to be more forceful than would otherwise be the case. This reasoning is reinforced by the Greenbook analysis. Because of the amply discussed new momentum in both consumption and investment, now we have to get the funds rate into the mid-7 percent area fairly quickly to stabilize inflation. Even the baseline forecast where the funds rate is rising to 7.25 percent does not quite do that.

Many of you have doubted this forecast because of skepticism about the Greenbook analysis and forecast. There are grounds for such skepticism but other indicators are not

much more reassuring this time around. The pipeline measure of inflation, unit labor costs, is now beginning to rise partly because the first-quarter productivity change was a bit soft and partly because wages also seem to be growing more rapidly. The lack of a further productivity pickup in the first quarter was mildly disappointing, but that might also serve as a reality check because we have been relying on productivity to rescue us from scattered inflation warnings and maybe now we should take these warnings a bit more seriously.

Unlike the case at our recent meetings, other forecasters also have inflation increasing at least in the short term. The Blue Chip forecasters are predicting a rise in short-term inflation and have raised that forecast in recent months. They also get that forecast by assuming higher short-term interest rates, showing that they really think monetary policy has to be tightened to avoid accelerating long-term inflation. The Michigan consumers have recently begun expecting higher short-term inflation, as have the Philadelphia Fed forecasters and various NAPM, NFIB, and NABE surveys. The Treasury bond market has also switched and is now indicating somewhat more future long-term inflation as measured by the increasing spread between the nominal and real 10-year Treasury rates. All approaches suggest that tightening is needed and all have changed from a month ago in the direction of expecting higher inflation. I think there is more pressure on us than there was a month ago.

Lastly, a strong argument for our policy of gradualism has been that it was expected by financial markets. Now that, too, may be changing. From the fed funds futures market one can compute a two-thirds probability that we will abandon our gradualist policy at this meeting. These results are confirmed by direct surveys of Fed watchers. Unlike the recent past, financial markets seem to be expecting us to move more forcefully against inflation,

which opens up a window of opportunity for us to do just that. From all of this you can probably tell where I would come out on policy today. Thank you very much.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, the Tenth District remains generally healthy. Employment growth is still running around 2 percent and we have an unemployment rate of about 3 percent. But I thought I would take just a minute to convey some anecdotal information on the District, which supports what Mike Moskow said in his comments in that to some degree it shows a change in the tone within the District.

First on wages and prices, there has been a subtle move toward pressing for higher wages and some efforts to raise prices. We met last week with both our economic advisory council and our board of directors. Fairly generally we heard from labor, including unions, that they are beginning to ask for a little more on the wage front, 4 to 6 percent. But also they are focusing very heavily on the benefits side, recognizing rising health-care costs and wanting to keep those benefits up and recognizing, too, that benefits are the nontaxable portion of income gains. Even among the non-union groups, there is continued pressure for wage increases and we are hearing more about that.

On the pricing side, we are still hearing the story that firms cannot pass on their higher costs through price increases, but we are hearing about more attempts to do so. In our area of Oklahoma and of Colorado there have been attempts to move prices up, say, 4 or 5 percent. Of that, maybe 1 percent will stick; but the fact is that the 1 percent is sticking. So, we do see that taking place. Nevertheless, we are also hearing from the same individuals that they sense some slowing in their regional economies. The obvious case is real estate. We are seeing a fairly significant drop in housing demand in the Lincoln, Nebraska area, for example,

and some slowing, though not a decline, in Kansas City. Denver remains very strong, and we are also seeing some carryover of that strength reflected in manufacturing, especially if it is related to the real estate sector--in home improvement, say--though there's just a hint of that.

Turning to the national economy, our projection is very similar to that of the Greenbook except for one important difference, which is that the moderation in growth in our forecast comes with a less aggressive interest rate move. Having said that, with the information we are getting on wage pressures, I would agree with those who suggest that we will need to continue to move rates up somewhat. One thing I want to caution about, and I hinted at it earlier in my question to Mike Prell, is that I think we want to be careful not to get "sweaty hands" with respect to our policy of gradualism in moving the funds rate up. From one point of view, we started this tightening when the funds rate was 4-3/4 percent and it is now at 6 percent. We know that a good portion of the effects of that increase has not yet played out. We know there are lags in policy. We know that the budget surplus is increasing, and that has an impact that we have to keep in mind. Considering that and the lags, it seems to me that the gradualist approach with quarter-point increases is still appropriate rather than suddenly moving forward to a more aggressive policy. That is particularly noteworthy because, while we may not be at the right rate yet, we started at 4-3/4 percent and are now at 6 percent, which certainly makes more sense today than it did a year ago. So, while I would readily agree that we need to keep the pressure on the economy, I think there is something to be said for staying with a gradualist approach. Thank you.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you, Mr. Chairman. On several recent road trips through the District to host meetings for bankers, I had the impression that in at least one dimension

there has been a distinct slowing. And that is that the spring crop of orange traffic barrels has been the best ever and is coming close to the objective of blocking at least one lane of every major road! [Laughter] Contractors and union leaders say that there is enough money to obstruct even more traffic if only they could find the laborers. [Laughter] One claim I've heard is that there are no unemployed construction workers. In thinking about what is happening, I don't think I want to tell you any more about the outlook for public sector construction through the forecast horizon because there's nothing that monetary policy is going to do about that now or for any time horizon that we care about. The revenue is there; it will be spent. The stadiums are under way; highway programs are under way. The money is available and it is going to be spent. So I am just going to stop talking about that!

Let me shift to other labor topics. Some of this reflects the lagged effects of earlier developments. Chairman Greenspan has cited Herb Stein as saying that unsustainable things have a habit of ending. I will tell you that there is a new definition of overbuilding in the retail construction sector. A company that builds very, very large stores that sell a variety of items--groceries, what we would call department store goods, hardware, and so on--just built a major facility in the north area of Columbus, a rapid growth area. The opening of the store was set for May 1st and they needed to hire 800 people. They began advertising for help with a starting wage of \$8 an hour. The week before the scheduled May 1st opening they had only 200 applications. They have now delayed the opening for at least a month and have raised their offering rate to \$10 an hour and have their fingers crossed that it will attract the workers they need.

Employees of hospitals in the area gave us some startling reports. Normally there is a cooperative relationship between the Cleveland Fed and the Atlanta Fed on the payments

system. But that's not the case in health care. Cincinnati area hospitals say that their employees are being offered bonuses of \$5,000 by Atlanta hospitals plus a year's free rent to relocate to Atlanta. Some Cincinnati area hospitals are approaching employees of other hospitals and offering them \$2,000 just to move across the street or across town. A Columbus hospital said that it has shut down three operating rooms in the face of a 100-nurse shortage.

The lack of labor and the implications of that have led to our hearing more stories about companies choosing not to expand in our area or choosing to relocate or add additional capacity in Mexico. It is not at all a sucking sound but it is a phenomenon of the type of labor market we are seeing. There are some silver-lining aspects to it. A union leader was adamant that I report to you that they now want a complete and unconditional amnesty for undocumented workers. That would help the INS problem in Indiana and they could concentrate on the southern part of Jack Guynn's District! [Laughter] He also wanted us to be aware that there is a possibility of a nationwide strike against General Electric involving five unions in a dispute over pensions. Another sort of silver-lining aspect of the tightness in labor markets is the increased emphasis on labor substitution investments. A contact from a company that ships out merchandise through Internet and 800 number catalogs sales--mainly gifts of its dessert products--said that a year ago their shipping cost per gift was \$1.06. They have had an 8 percent across-the-board wage increase and even higher benefit cost increases and have reduced their cost per gift to \$.96. So, productivity still is helping us out.

And as we head from spring into summer, employers in the services sector say it is going to be a very tough season for our amusement parks. Cedar Point wants to hire 4,000 workers for the summer and they expect _____ of those will be foreign students. They are using hiring or retention bonuses as well as free or heavily subsidized

housing to try to attract them. All of the major amusement parks in the region are increasing prices. The smallest increase of 5.4 percent is at a park that increased its fee 10 percent last year. The highest is at Cedar Point, with a 15 percent increase in admission price. We have been told that admission at Six Flags in New England will be up 22 percent for this summer. And increases in parking fees are said to average 10 percent. We've had reports of other price increases of note. One was a 33 percent increase in paper costs. These, of course, are all relative price increases and you all know that. Another, which was reported in this morning's Wall Street Journal, was that Chubb Insurance is raising premiums.

A major worldwide supplier for the motor vehicle and housing industries, said that its suppliers are asking for relief from the price caps in their long-term contracts. He said that with the strength in recent orders from Europe, Asia, and Latin America--in his words it is the first time all global markets are coming in strong--they expect to be able to renegotiate the price caps and to pass the higher costs on to consumers.

All of these anecdotal reports of tight labor markets, increasing cost pressures, and efforts to raise prices are the lagged effects of the very strong final demand that we have experienced--with an emphasis on the past tense of the comment. Very recently there are some tentative indications that growth in final demand is moderating, perhaps in response to the policy actions taken since last June. In recent meetings with directors, advisory council members, and bankers we've heard many more suggestions that a degree of caution is starting to be reflected in the behavior of both businesses and consumers. Certainly the combination of higher energy costs and higher debt servicing burdens is starting to have an impact. I look forward to the June meeting, our Humphrey-Hawkins meeting, when we will get a longer-

term perspective on the outlook beyond 2001. That's because the effects of actions we have already taken as well as any action we take today will really influence that period much more than the short term.

We are now experiencing a very familiar pattern. Once we start raising the federal funds rate, market participants and Fed watchers talk about how far we will have to go and they extrapolate that to ever-higher rates. In February of 1995 when we had previously increased the fed funds rate to 6 percent, the futures rate five months out indicated a funds rate of 7-3/4 percent. And some commentators were talking about a rate over 8 percent. Nevertheless, we stopped at 6 percent. We disappointed them and we were right. In December 1998, after the reduction of the funds rate from 5-1/2 to 4-3/4 percent, at least one very vocal Fed watcher said that we would cut the rate to 3 percent. We did not and we were right. The point is that the one thing that is certain is that we will need to stop raising the fed funds rate long before the commentators and the fed funds futures markets say we will. And the question of when to pause cannot be avoided. I think we are now much closer to that point, possibly with an action at this meeting, than is suggested by the assumptions behind the baseline forecast.

I have one little comment on the issue of raising the real fed funds rate--which is what some of my staff occasionally refer to--or otherwise raising real interest rates, let alone real exchange rates. We don't raise and lower real interest rates. The markets do that. Fundamental forces of all types influence real interest rates and real exchange rates. The issue is not that but where we are pegging the nominal fed funds rate--the overnight interbank rate--relative to market determined rates, nominal as well as real. I now think that even talking about the concept of real interest rates is not only not useful but counterproductive. It is really

market interest rates more generally, both the real and the nominal components, that matter. The issue is the nominal fed funds rate and whether we have it at the right level to be consistent with an expansion of central bank liquidity that is consistent with what's going on in the economy.

I was pleased to hear the Vice Chairman's remarks and caution to the Committee about the international situation. I think that is very important. It probably doesn't get as much attention as it should, especially in the environment in which we find ourselves. It is always difficult to make monetary policy in presidential election years, including Mexico's presidential election years, as we have seen many times in the past.

Our objective, of course, is stable purchasing power of the dollar for our economy. But increasingly that means for a lot of other economies, too. Our policies, as we are seeing, do affect foreign countries' policies and, therefore, foreign economies. And that feeds back to affect our economy and our ability to achieve a soft landing, in line with the points of concern that Vince Reinhart raised in his remarks. Thank you.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Overall economic growth in the Eleventh District remains quite healthy. However, a few signs of slower growth in response to higher interest rates are just beginning to appear. At our board of directors meeting last Thursday, we heard more of a mixed picture on the economy than we have in quite some time. In the Dallas area the demand for large custom homes has slowed noticeably in the last month, probably in response to the lower and more volatile stock market. In Houston the housing market is said to be doing well but much less so than a few months ago. Throughout Texas, with the possible exception of Austin, nonresidential construction of all types--offices, commercial space,

roads, and other infrastructure--has continued the slide that began in January. On the other hand, one of our directors from the industry noted that she is seeing the strongest growth in electronics in four years. Purchases of PCs by businesses have begun to pick up.

Labor shortages are still the most common anecdote. It has even spread to academia where "raiding" parties are trying to recruit away faculty members. In Austin, where shortages of high-tech labor have persisted for a longer time than in other parts of Texas, some employers have been giving quarterly rather than annual salary increases, as Bill Poole reported for his District. In spite of the pressures on wages, there are few examples of businesses passing on higher input prices unless the increases are related to higher energy costs. In that regard, during my cab ride here yesterday I noticed a little sign in the cab that said a 50-cent surcharge was being added because of higher fuel costs, with dates indicating the time period during which the surcharge would be applicable. Nevertheless, there are exceptions. In Texas competitive pressures are keeping a lid on chemical prices.

Texas oil and gas employment is finally responding to the now fairly sustained higher prices we have had. Oil and gas employment increased in March at a rate of 6.4 percent, the rig count is rising, and well permits increased in the first quarter in Texas from 793 to 1,121.

On the subject of automobiles that Mike Moskow was talking about earlier, let me pass on a comment of one of who owns some car dealerships. He was telling me how remarkable it is that when one part of the country experiences a shift in purchasing, the pattern is almost identical all over the country; it's

uncanny the way the country moves together on that. And he reported that in early May sales dropped off quite considerably in those dealerships with which he is familiar.

At the national level, it is a little harder to find consistent responses to the Fed's rate hikes. Last month's weakness in retail sales could be the start of a new trend, but it is too early to judge. Housing demand probably has begun to deteriorate, but a rush to buy in anticipation of further increases in interest rates may have masked the underlying deterioration. April's down-drift in the stock market could produce a notable reverse wealth effect for the remainder of the year. This morning's CPI number serves as a hopeful suggestion that we may not be guilty of doing too little too late or be behind the curve. Our gradualist approach has served us well and I see no compelling reasons to depart from that strategy. An upcreep in inflation pressures calls for a measured response and continued vigilance. Or, as Tom Hoenig put it, let's not get "sweaty hands."

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. In light of the time I will shorten what I otherwise would have said, but I do want to say a couple of things. First, I agree with others that the incoming data since we last met generally support our ongoing vigilance and concern on the inflation front, but to me those data do not indicate that the war is lost or that we have fallen behind the curve. I tend to agree that inflation risks have picked up and I, therefore, think that we should continue to act, and probably with a slightly greater sense of urgency, in order to achieve balance in our economy.

As for the factors that suggest the risks of inflation are, if anything, perhaps a little stronger, a number of people have talked about the role of consumer behavior, and I would endorse that view. We have also talked about a number of other indicators of tightening in the

economy that had been very quiet and seem to have suddenly come awake. Let me just put two on the table that have not come up thus far. Capacity utilization, which had fallen out of favor as a topic of discussion around this table in the last two years, appears to be reemerging as an indicator of resource tightness. At about 81.4 percent that measure has reached its highest reading in two years. Similarly, the labor force participation rate, which had been mysteriously quiescent, also appears to have returned to a slightly more normal pattern for a strong economy, edging up to 67- $\frac{1}{2}$ percent, which is well above the average that prevailed for the three previous years. To a degree, therefore, I think strong demand-led and investment-led growth is forcing some of the usual indicators of resource tightness to return to a more normal pattern.

These elements of resource tightness I think are starting to show through a bit both in costs and possibly in price pressures. Employment costs did jump 1- $\frac{1}{4}$ percent in the first quarter, the fastest pace since 1989, which supports the notion that strained labor markets are starting to have an impact.

Some of the survey data, including those from small businesses, also show that compensation costs are increasing. I view that as important supporting data. More broadly on the inflation front, the GDP deflator posted its largest increase in three years in the first quarter. And as others have indicated, short-term inflation expectations have moved up for the public at large. Purchasing managers also seem to sense a tightening tone in prices.

However, I think all is not lost on the inflation front, and I believe there are some real arguments for a less bleak picture. The CPI number for March was probably a bit of an anomaly, with much of the uptick in prices in the lodging component, which was a replay of April 1999 and was an upside surprise then as well. Similarly, if one looks at the retail sales

figures, there is a possibility, as President McTeer has indicated, that perhaps we are seeing a bit of a slowing but it's too early to say for sure. More importantly in my view, the financial markets do not necessarily show a major pickup in inflation expectations. I would note that a few others have commented on inflation expectations and, contrary to what some have said, I'm not sure that I have seen an increase there. I looked at the yield spread on 10-year Treasury bills versus 10-year TIPS. And at least on the chart in front of me the spread seems to have picked up a little starting in October 1998 until about the middle of 1999 and, with two wobbles, then settled down at around 2 percent. Of course, one can read a wobble up or down and either weigh it heavily or not weigh it very strongly at all. But contrary to the staff's forecast, the markets are not suggesting a strong increase in inflation expectations in my view. Needless to say, Mike Prell has put on the table the question of whether the market has it right or the forecasters have it right. And since I am neither a market participant nor a forecaster, I will let time tell on that one.

The second point I would note on this front, which again is not statistically proven, is that one could reasonably expect that the recent stock market volatility would in fact damp consumer expenditures somewhat. The third point I would note is that we know corporate bond rates have increased noticeably since the start of the year, just as the issuance of corporate debt has also been cut back. So, both developments in the corporate bond markets have the effect, I think, of amplifying our tightening moves and forcing borrowers back to banks, where conditions on both loan rates and terms or availability do seem to be tightening. So, I believe there are reasons to think that some of our actions have been noticed by the market and will be reinforced by the market.

Finally, I'd underscore a point that First Vice President Stone and a couple of others made, which is that long-term inflation expectations have not moved appreciably. Given this configuration, I believe that perhaps we should move a bit more aggressively than in the past, but not signal that we are concerned that the inflation genie is out of the bottle. While the risks may be somewhat heightened, I do not believe that we are clearly behind the curve. I think the market is helping us in some ways. And I would join with a number of the Reserve Bank Presidents and First Vice President Stone in suggesting, as President Hoenig said, that we not have "sweaty palms" here. On the other hand, I think some action today clearly will help us to reinforce a market perception. If we can do that without overshooting, I think we can prove that Mike Prell, while he will be missed, has left the institution capable of making some good judgments. [Laughter]

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Thank you, Mr. Chairman. The Bluebook gets to the heart of what has changed and what has not changed since our last meeting. I quote: "... incoming data suggested both that aggregate demand had continued to grow more rapidly than potential supply and that wage and price developments were becoming more worrisome." So what has not changed is the momentum in demand and production and the imbalance between the growth in production and in potential supply. But the quote does not make entirely clear whether the staff was referring to an imbalance in the growth rates between demand and potential supply or in the levels of actual and potential output. It occurs to me that the ambiguity might have been intentional to allow each of us to interpret the observation in a way that we could accept. But I believe another critical and persisting element is a large imbalance between the levels of actual and potential output. This view is very consistent with

the Greenbook and many other forecasts and it does suggest that we have a significant challenge ahead of us. I don't know if we have "sweaty palms" or even if I have "sweaty palms," but I think the challenge is quite considerable. And it is along the lines that I think Mike Prell laid out very well in his presentation. By the way, I thought that was a particularly insightful presentation, although I should note that I always tend to find presentations insightful when they tend to confirm my own bias. [Laughter]

MR. PRELL. I will take half a loaf!

MR. MEYER. But this is a good point for me to say how much I have valued your presentations to the Committee during my tenure here. And you really ended on a high note today!

So, what has changed? Well, first of all utilization rates have increased slightly further. There should not be any surprise about that. As long as demand is growing faster than potential supply, of course utilization rates will increase. Now, I recognize that monetary policy acts with a lag, but my view is that the restraint we have put in place since last summer is not sufficient. The virtual absence of signs of slowing suggests that if we don't take further steps to slow demand growth, utilization rates will most likely increase still further.

A second change is that inflation has become both more of a reality and more of a threat. It is more of a threat because of still high utilization rates and continued above-trend growth. But it is more than a threat. We are seeing, I believe, the beginning of a pickup in inflation rates for both compensation and core consumer prices.

Certainly one can find some mixed signals, but I view the data on balance as quite compelling. There is a conflict among some of the data on wages and compensation, but on the basis of both the ECI and the higher frequency data for average hourly earnings I think it

is clear that we are at an inflection point here. To me this assessment is very consistent with the reports summarized in the Beigebook and with the anecdotal reports that I am hearing as the various state banking groups visit the Board.

As for inflation, President Parry mentioned that the core PCE was moving up. Its 12-month rate is now 1.8 percent, which is the highest rate of increase since October 1997. And it has moved up 0.4 percentage point since just the end of last year. In terms of the core CPI, of course, its 12-month rate is the same as it was a year ago. But if I look at the pattern, I see that beginning in September the monthly increases were rather consistently higher. I note that of the next four months to be dropped out of the 12-month core CPI, three of them were 0.1 percent and one was 0.2 percent. So, I think the 12-month rate is moving up from being around 2 percent to being around 2-1/2 percent, consistent with what we are seeing in the core PCE. Again, why should we be surprised? Given the prevailing utilization rates and the dissipation or reversal of favorable supply shocks, some deterioration in inflation is what most forecasters have been expecting.

I think the third change is in the nature of the forecast errors. For a very long time we have been saying faster-than-expected growth and lower-than-expected inflation. No more. So far this year there is relatively little surprise about the strength of growth, which remains robust. And some key inflation data are now coming in either worse than expected or at least confirming expectations of an increase in inflation pressures--particularly, as I said, the core PCE and CPI measures, the ECI, and average hourly earnings. This reflects, in my view, the fact that the dominance of favorable supply shocks is receding. And as a consequence, the implications of the supply/demand imbalance are coming into clearer focus.

At the end of last year there was a bold headline in the Wall Street Journal: “So long supply and demand.” I have been waiting for a new headline: “Welcome back supply and demand.” And then today in the Wall Street Journal on the front page there is an article about firms starting to raise prices. It begins, “Even in the new economy at least one old rule still applies: If demand exceeds supply for long enough, sellers will raise prices.” Our job is clear. We must restore the balance between supply and demand. Until we do so, the threat and reality of higher inflation are likely to remain with us.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. Thank you, Mr. Chairman. Once again it seems that the basic conditions facing the Committee are little changed from those prevailing at the time of the most recent several meetings, except that perhaps many now familiar concerns have been escalating further. The economy has turned in another remarkable quarter, and recently hard evidence has begun to replace earlier perceptions that compensation increases are accelerating and some measures of inflation may now be on the move. There is little point in further reciting the factors at work here. It appears clear from this discussion that most, if not all, of those around the table see the risks as continuing to be heavily on the up side, with further policy moves in order. As the Bluebook discusses, the operative question is: By how much?

There are a number of reasons to feel it is unlikely that inflation is suddenly about to surge. Among other factors the dollar remains remarkably strong. Oil prices appear to have peaked and commodity prices generally have flattened out. Productivity increases continue to hold unit cost increases at bay. And the impact of policy easing in the fall of 1998 should be dissipating while the tightening over the past year should increasingly be kicking in. I believe we are still on or perhaps still ahead of the curve, although some inflation creep

seems inevitable. However, any signs of economic slowing are scattered at best and quite inadequate in my view to provide confidence that the needed easing of activity is likely to occur without significant additional policy moves. It is helpful that both the real economy and financial markets today seem to be presenting us an unusual window. The more aggressive policy path is both expected and by many considered acceptable and is thus likely to present less risk than the more conservative alternative in the near as well as the longer term. I believe we should grasp this opportunity. Thank you.

CHAIRMAN GREENSPAN. It is a little late but let's go for coffee if it's there. It is probably iced coffee at this point!

[Coffee break]

CHAIRMAN GREENSPAN. Mr. Lindsey.

MR. LINDSEY. As indicated in the Bluebook, the issue today would appear to be not whether to continue to tighten monetary policy at this meeting but rather by how much. At the March meeting, the Committee contemplated future firming, and its public statement conveyed its sense that the balance of risks was pointed toward higher inflation. Incoming data since that time have on balance strengthened the impression of inflation risks. The most obvious contenders for policy action today are increases of either 25 or 50 basis points.

As Mike indicated, core inflation picks up further next year in the staff forecast. That forecast essentially is consistent with continued gradual increases in the funds rate target this year. For example, increases of 25 basis points at this and each of the next four FOMC meetings, followed by a constant 7-1/4 percent funds rate through next year, would comport reasonably well with the policy assumption in the Greenbook. By our reading of term premiums, the 7-1/4 percent funds rate next year would also be somewhat higher than the expected peak for that rate that appears to be currently built into financial asset prices. The projected result of these financial conditions would be a core PCE inflation over next year of 2.4 percent, after an expected 2.2 percent over this year. Because labor markets would still be experiencing an unsustainable degree of pressure late next year, the process of underlying price acceleration would persist beyond that time.

The case for the 25 basis point move at today's meeting could rest on the judgment that extending the previous series of quarter point moves today, and perhaps continuing that pace at later meetings, would have a reasonable chance of keeping core inflation contained, in contrast to the staff view.

A supporter of another gradual move might believe that the staff has overestimated the ongoing strength of aggregate demand. In this view, as a result of the recent greater stringency in credit markets and weaker behavior of the stock market, economic growth may already be poised to slow appreciably, perhaps by enough to match the expansion of potential supply.

Support for a 25 basis point move also might derive from the view that the growth of potential supply itself probably will continue to pick up next year, as structural productivity accelerates further. Another step-up in trend productivity growth could temporarily hold down unit labor costs even if wage gains are trending higher in response to taut labor markets. Other things equal, real private interest rates eventually would have to reach still higher levels at some point, but the need to get there is not urgent, given this near-term depressant to inflation. And, of course, continuing even a gradual pace of tightening for an extended period would eventually produce large increases in nominal short-term interest rates, and in real short-term interest rates as well unless inflation expectations rise appreciably.

The Committee could also want added evidence on the level of resource use that will provoke price acceleration. The staff may have overestimated the extent to which the economy in the longer run is inflation-prone. Especially if the long-run NAIRU is substantially lower than the staff has estimated, continued gradualism may not be likely to allow a continuing, underlying acceleration of prices. From a long-term perspective, the surprisingly favorable inflation and output performance of the U.S. economy over the second half of the 1990s understandably has fostered a greater sense of uncertainty about economic relationships. This observation might well be interpreted as providing support for staying with the gradual policy approach used by the Committee to date. Also, this year's generally stronger-than-expected data on real GDP, employment, and inflation could be perceived as more noise than signal. But this result rests on a number of demand and supply forces evolving favorably over coming months.

A less optimistic view of the probable balance of supply and demand—for example, as seen in the staff forecast—would support adopting the 50 basis point option today. The Committee may be particularly concerned about the potential for accelerating prices under

continued gradualism. A 50 basis point move could be motivated by the view that the more restrictive financial conditions associated with adopting the aggressive policy approach, at least at this meeting, would offer a better chance of containing inflation, while still not seriously risking an excessive degree of firming. The more aggressive strategy would lessen the potential for policy being “too little, too late” and for allowing a significant increase in inflation that would be hard to reverse. In this view, the perceived expectation in a statistical sense of the costs of an inflationary outcome--that is, the probability of it occurring times the welfare cost if it does--would be high enough to outweigh the smaller perceived expectation of the costs of a tighter-than-needed policy inducing unwanted economic weakness.

The arguments for a 50 basis point move today might seem even more compelling to the extent that the Committee was persuaded by the discussion in the “Alternative Simulations” section of Part I of the Greenbook, based on the FRB/US model, which Mike also alluded to. That section suggested that next year’s acceleration of core prices can only be short-circuited by a substantial steepening of the trajectory of policy tightening. For example, if the FOMC were to raise the funds rate in four steps of 50 basis points each this year--and were to keep the resulting 8 percent level constant through next year--then in the simulation core PCE inflation would be held to a little above 2 percent in both years. This extent of policy tightening would succeed in capping core inflation in part through its effects on the dollar and on longer-term inflation expectations. In addition, the slowdown of real GDP growth to only 3-1/4 percent next year would raise unemployment to a 4-1/4 percent rate by the fourth quarter. Labor markets would be on a path to reach sustainable conditions later on.

The Committee’s choice of the balance of risk statement with a 50 basis point move would be somewhat less clear-cut than with a 25 basis point move. In the latter case, a continued tilt toward inflation would seem to be the obvious choice. But as I just indicated, even with a 50 basis point rate hike, the staff believes that further substantial funds rate increases would be needed to prevent inflationary pressures from emerging. Thus, even with a half point action today, in our view inflation risks would still dominate. The Committee may agree with this judgment, although you no doubt depart in various ways from the point estimates of the Greenbook’s projections. If the Committee instead believes that the sizable 50 basis point move has an excellent chance of balancing the risks, it should indicate that. The new language does not reference the future course of policy, so if the Committee still suspects that the risks are unbalanced but wants to pause for a while to weigh the effects of accelerated tightening, it would need to indicate this intent in a separate sentence in the announcement.

The current funds market futures quote for May of 6.23 percent implies that the odds that market participants put on a 1/2 percentage point move today have moved somewhat below yesterday's odds of about two-thirds. Anecdotal reports suggest that they also expect the FOMC statement to maintain a sense of unbalanced risks toward inflation. Thus, the rate move part of this combination might be enough of a surprise to raise interest rates a little across the maturity spectrum. Combining a 1/2 point hike with a balanced statement about the risks would represent two surprises in offsetting directions. And the difficulty of predicting the reaction of puzzled market participants makes the direction of the immediate interest rate adjustments uncertain, although the change in market rates would probably be muted.

Thank you. That concludes my prepared remarks.

CHAIRMAN GREENSPAN. What actually happened, in basis points, to the federal funds futures rate for June as a consequence of the CPI release?

MR. LINDSEY. I have the May figure; I do not have the June figure. Does someone have that?

CHAIRMAN GREENSPAN. What is the May figure?

MR. LINDSEY. The May figure as of about 11 o'clock this morning was 6.225 for the futures rate.

CHAIRMAN GREENSPAN. I just want the change.

MR. LINDSEY. Let me give you yesterday's. We had 6.23 for May, although that was rounded.

CHAIRMAN GREENSPAN. And what do you have now?

MR. LINDSEY. We have 6.225 now. A significant change that also affects the calculation of odds is not just this futures rate but, believe it or not, today's spot rate. That rate is 6.4375, or 6-7/16 percent. So those are the two relevant new pieces of information that we got today that affect these odds.

CHAIRMAN GREENSPAN. Further questions? President Jordan.

MR. JORDAN. David, you started with a reference to the risks at our last meeting as we stated them but also to the forecast and discussion of the risks around the table. But then you ended with the focus on the interpretation of our statements of the balance of risks. Isn't it the case, as long as there are lags--and maybe long and variable lags--that there will be a time when we will stop raising the funds rate when the risks of reported inflation are still rising? We cannot wait until we have seen the first break toward a downward trend in inflation or we are going to cause a recession for sure. So there has to be a time when, in spite of what the futures market projections say and in spite of what the forecasts and projections say, we stop. Suppose we raised the funds rate by 125 basis points today to 7-1/4 percent. Wouldn't the risk still be that inflation in the month ahead would be higher?

MR. LINDSEY. I'm not sure that the sentence on the balance of risks refers to the month ahead or even the next few months.

MR. JORDAN. That is why I am raising the question.

MR. LINDSEY. Exactly. In the case you cited, that really is an issue the Committee would have to confront. That is, the Committee may expect inflation rates for the next three months to continue on the high side at least, though maybe not rising, and then ebb down. The question the Committee would then face is what to indicate with respect to the balance of risks. If I were a member of the Committee, I guess I would tend to say that the risks would be balanced. So, even if I thought we might have some disappointing readings for a few months, I would be tempted to look even further ahead into the foreseeable future, which is longer than three months, and make a statement that the risks were generally balanced. But I admit it would be a temptation not to say that.

MR. JORDAN. Let me follow up. Suppose my own model had really long lags--I used to think the lag was about two years--and I think that the stance of policy today affects the inflation rate in 2002. And my guess is that inflation is going to rise for the next year and a half no matter what we do, just due to good old-fashioned momentum. Then how do I use this balance of risks statement as a communication device for people out there looking at it? How do I handle that communications problem?

MR. LINDSEY. I may actually wish to turn to other members of the Committee to answer that! [Laughter]

MR. FERGUSON. Let me step into the staff role here. What we've worked hard on in developing this language is to try to get in this concept of the "foreseeable future," which is clearly meant to be longer than the intermeeting period and longer even than after the next meeting. As the working group and the Committee talked about this, frankly, I think most people thought the foreseeable future encompassed something like the lag that you are discussing. Obviously, it would be a judgment call. But if we thought that we had put in enough tightening today that we would slow inflation over a period of let's say 18 months or so, it would not be unreasonable to say in this statement that we think the risks are balanced for the foreseeable future. It is clearly longer than three months. I think most people viewed it as longer than three months and probably somewhere on the order of a year to eighteen months. Needless to say, we didn't try to tie ourselves down explicitly.

MR. JORDAN. May I ask from that whether it is intended to be interpreted that we could at some point say with this action we now see the risks as balanced?

MR. FERGUSON. That is intended to be a possibility, yes. It is also quite possible, though, that we might say we have taken this tightening action but we still do not see

the risks as balanced just yet. However, the reason we have not tightened further, obviously, is that we are waiting for incoming data and a variety of other things so that we can make a more informed judgment. In fact, since we've used this formulation, we have had the option of both raising rates but also saying that the risks were a little unbalanced. And it is also true, as you made quite clear, that the market--I think appropriately--interprets statements that the risks are not balanced or more toward inflation as at least a possibility, though not a certainty, that we will continue to raise rates. So we should not pretend that we have broken that link because it is still there, but it is not as strong as it had been before.

MR. LINDSEY. If I could just interject to answer the Chairman's earlier question, the June federal funds futures rate fell a basis point today. It is now at 6.475.

CHAIRMAN GREENSPAN. Further questions for David? If not, let me focus on the previous conversation because it really covers the issues that I think confront us. My own judgment, and what I plan to recommend to the Committee, is that we have an opportunity now to move the funds rate up 50 basis points, remain asymmetric, and effectively adjust our longer-term posture to a better position than the one we are in at the moment.

The reason I am not concerned about moving the rate up quickly at this stage is that I think the evidence indicates that productivity, indeed perhaps underlying GDP, is still accelerating. I recognize that the staff's estimate of productivity growth for the first quarter, based on the latest published figures and adjusted for the defense spending anomaly, is 1-1/2 percent. I don't believe that estimate for a fraction of a second. I don't think it has even a remote possibility of being accurate because of the evidence we are getting on profit margins, which clearly are still opening up at this point. Indeed, using the available data on income and profits, which essentially reflect the unit cost structure of nonfinancial corporations, the

productivity growth number that falls out of that system according to staff estimates is a 6 percent annual rate. That number is consistent with our unit cost analyses and our estimates for prices, profits, and wages, granted that the estimate for wages may be a little to the weak side. I would submit that what is creating a 1-1/2 percent estimate for productivity growth is the combination of a peculiar statistical discrepancy and some very dubious data in areas of the economy other than nonfinancial corporations; the latter provide our most reliable underlying data.

The general view of a persisting acceleration in productivity is being picked up in a lot of the company reports where shortages of important inputs reportedly are beginning to arise. These are particularly acute in the high-tech area. Intel is in difficulty. Cisco is in difficulty. The problem of semiconductor shortages as a consequence of the earthquake in Taiwan has left some very deep pressures in its wake. One reason is that the effects of network externalities in the high-tech area of our economy are clearly beginning to show up in an exaggerated manner. That is, as we are all aware and as I have mentioned previously, when we go from two-at-a-time connections to large network connections, the benefits do not just go up arithmetically; they go up exponentially. The network externalities effect of our high-tech system is creating a major underlying acceleration in the economy.

All the problems we have discussed previously, mainly the pressures on the safety valves of net imports and the labor market, are putting substantial pressure on the total system. What is remarkable at this stage is not that inflationary forces are picking up. It is that there is so little evidence of a pickup. I think, for example, that the acceleration in wages is unambiguous. The one statistic nobody has mentioned today is the fact that average hourly earnings, adjusted for the industry mix that BLS publishes, is up 0.55 percent in April. That

increase is far greater than even the ECI is suggesting. The average hourly earnings number has not been a particularly good estimator of the ECI, but it is an indication that the bias is clearly on the up side. Nonetheless, when we look through the configuration of unit costs, the estimate we end up with is that unit costs have fallen over the last six months for nonfinancial corporations, indeed for nonfarm business generally. If this is indeed the case, all of the price acceleration we have seen reflects widening profit margins. This is not an indication of the beginning of a major acceleration in prices. Indeed, the core PCE deflator for April rose less than 0.1 percent. And over the 4-month period from January through April, when most of the inflation is showing up in the CPI, the average rate is 0.17 percent monthly or an annual rate of approximately 2 percent. While that rate is higher than it was earlier, there is no evidence at this stage that we are experiencing a real underlying deterioration in inflation of the kind that we typically have seen in the past.

I think we are in a quite different environment than we have seen in the past. In such an environment real long-term interest rates have to rise, and indeed they have risen very significantly in the last several weeks. Real long-term BBB rates are up over 50 basis points after gradually edging higher for quite some period of time. This indicates that the markets are adjusting rapidly to the evidence that overall demand forces are becoming very strong, driven in large part by the supply factors themselves.

I mentioned, I think late last year, that I was concerned about our tendency to get caught up in statistical acrophobia and feel the need to make our forecasts converge to the mean because that is basically what happens in our models. I think we all have a tendency to do that. I myself think that we will see some slowing in the macroeconomic data that we usually look at, in part because our seasonal adjustments are inadequate. That is, it is very

difficult to seasonally adjust for the type of global warming and related rise in degree-days that we experienced during the winter months without some impact on the GDP figures. So, it is perfectly conceivable that the GDP growth numbers for the fourth and first quarters were just an exaggeration. They will slow down in the second quarter, even though no slowdown or in fact major changes may have occurred. I think what we have is still the beginning, or perhaps we are well into it at this stage, of a significant long-term change in the behavior of the economy. This is not to say that we don't have a cyclical element involved in these growth numbers nor does it mean that higher interest rates, especially real long-term rates, are having no effect. Indeed, the evidence is now beginning to show that the alleged absence of any effect from what we have done to date, or more importantly what the markets have done to date, is a false notion.

As Governor Ferguson pointed out, we have seen a very dramatic shift in the borrowing of the business sector. Net issuance at the long end has come down, and the total of business loans plus commercial paper has suddenly surged. What that means is that a very large number of business firms are moving out of the long end of the borrowing market to the short end. The reason is not that they are going to get significantly lower interest rates, because they are not, but that they expect the surge in interest rates to be temporary and they will be able to refinance their recent borrowings at lower long-term rates in the future. This is the classic way in which officers of corporate and financial firms behave. As soon as they perceive that interest rates are not coming down, they will begin to adjust their capital expenditure projections. This process has the effect of producing a gradual slowing.

We are seeing some evidence that housing starts are slowing, but the evidence is really marginal. We are getting the same type of responses that Mike Moskow got from the

motor vehicle manufacturers, which suggest that these two sectors of the economy are not doing all that outstandingly well in May. Activity is still high in both, but it has come off its recent peaks to a considerable degree. The problem that we have with interest-sensitive areas of the economy is that if overall economic activity is accelerating, then what interest rates do is to alter the relative shares of expenditures. And, indeed, if motor vehicles and housing are flattening out while the economy is rising rapidly, interest rates are doing what one would expect them to do. Responses are under way, and as far as I can see our policy moves have tracked the long end of the market very well. If we move 50 basis points today, we will continue to track it very well, and I think that is what we want to try to do, namely try to maintain a policy that is consistent with the way market forces in the long end of the market are going. I cannot say that I would personally envisage that the inflation pressures are about to ease quickly. But Jerry Jordan is not wrong. I remember 1994 exceptionally well. At one point we decided to sit still while the markets were driving forward. We chose not to continue to move and I think correctly. Now, that doesn't mean we will always be correct. It may be that we were lucky, and if it was luck, the next time we may lose.

I believe the risks in moving 50 basis points today are not very large because I think the underlying momentum in the economy remains very strong. What is going to happen in the future is probably going to be dependent on a number of developments that we can't really forecast. One is crude oil prices. Those prices were declining when Mike and his colleagues started to put the Greenbook together. One of the reasons was a surprising slowdown in domestic demand for oil. It essentially showed up in the form of a significant slippage in the demand for residual fuel oil in the first quarter stemming from a major shift throughout the world toward natural gas. I think the slippage amounted to 300,000 to 400,000 barrels a day.

In Germany there also was a major shift into lighter distillates. Overall domestic demand in the first quarter actually was up only marginally over a year earlier. Demand was stronger in April, and that may be the reason why crude pressures are currently rising. But as far as the United States is concerned, the prospects of rising inflation pressures stemming from oil may be over, and I say "may" because one cannot rule out a big spike. The reason relates to the very large retail marketing margins in gasoline. These occurred as a consequence of the sharp increase in crude oil prices earlier, which followed a dramatic decline in crude inventories. The jump in crude oil prices pushed up retail gasoline prices at one point, as I recall, some 10 to 15 cents a gallon above where a historically average margin would have suggested they should be. Those margins have eased back down, but they are still, I believe, something like 8 to 10 cents a gallon above average gasoline marketing margins in the United States. So even if we have some pickup in crude prices, the margins may still fall back to earlier norms, and it strikes me that the upside pressure on gasoline prices may no longer be there. The same is true for home heating oil. Obviously, if there is a big spike in crude, all bets are off, and that could create some fairly significant problems for the economic forecast.

The crucial issue here is what will happen to domestic demand and whether the financial markets will readjust themselves to higher interest rates and ultimately exert a retarding influence on consumption expenditures, housing, and the stock market. If those forces are essentially in place, as I believe they are, we could end up with an economy that comes in at a level below the Greenbook forecast.

I think it is too soon to make that judgment. It is conceivable that we will be more inclined to reach that conclusion in June, but I think it would be a mistake to do so now. I believe our best bet at this stage is to follow the long end of the market as we have been

doing, and that implies 50 basis points as far as I can see. Because there is as yet no compelling evidence that inflationary pressures are easing, I believe it would be a mistake not to stay asymmetric and our press release should reflect such a decision. That is all I have to say. Would anybody like to comment? Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I support your conclusion. Let me address myself to the concern about "sweaty palms." We have to remember that the mission that we have been given by the American people is to provide a monetary policy appropriate for sustainable economic growth through price stability. The demand in the economy is simply not sustainable. It has worsened significantly since our last meeting and, therefore, it seems to me absolutely essential that we pick up the pace of tightening. That in no way leads me to believe that we are going to end up at 7, 7-1/4, or 7-1/2 percent on the funds rate. I don't have any idea where we are going to end our tightening. And I think we have to be very cautious and make these judgments very carefully so that we don't overdo the tightening. That's especially the case given my concern, which I expressed earlier, that we have such a state of euphoria among the general public in the United States that it could be subject to a rather rapid and quick change. In that circumstance the likelihood of overdoing it on the tightening side is something we have to keep very much in mind.

But for today if we did not do 50 basis points with the balance of risks language indicating a greater concern for inflation, I think we would just feed the euphoria that I believe at the present time is rather dangerous. That would be very inappropriate to do. So, I think we are not in the "sweaty hands" period but in the "cool heads" period, and I believe this is the right action to take.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, everything you said convinced me that a 1/4 point seems right. Inflation is not taking off and in fact a lot of the evidence suggests some easing off in the expansion. Moreover, I don't think we should be validating the market necessarily. I think we should be looking at what is in front of us, and 1/4 point with asymmetric language seems most appropriate. A year ago when we were at 4-3/4 percent on the funds rate, there was a better case for moving more aggressively in the sense that we had put in a lot of stimulus. And yet we were very cautious in moving up. It seems to me that we have been on a pretty good track in our policy actions and if I had my preference, I would stay on that track. I'll put that view on the table for consideration.

CHAIRMAN GREENSPAN. President Guynn.

MR. GYNN. I strongly support your recommendation, Mr. Chairman. I think all of the right arguments have already been made. Thank you.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Mr. Chairman, I support your recommendation. I'd also like to speak to the issue that Tom Hoenig raised. I think we want to be careful not to confuse gradualism and predictability. While the goal of predictability is extremely important, we can't always make policy predictable. Sometimes we are going to have to surprise the market. But I think it is extremely helpful when we are able to have the markets very much on the same wavelength as we are. An increase of 25 basis points, after all, has been in the market for quite some time. The extra 25 basis points, if we in fact opt for 50 basis points today, has only been in the market since the ECI release. So, all the most recent reports reflect a policy assumption in the marketplace that includes the 25 basis points that we are putting in place

today, and then we are saying we should put in some more because the market believes that additional restraint is necessary.

News from this meeting will consist of three pieces. One piece is the funds rate, and we are matching what the market expects, so it's not really news. The second is the balance of risks language and, given what is in the fed funds futures market, I think we will be matching what the market anticipates. The main news out of this meeting will be the statement that accompanies our policy announcement. To my taste, it is going to be important that our message somehow says that, given what we know today, we believe that rates are going to have to continue to rise. I don't know how far that process is going to have to go, whether it's more or less than what the Greenbook forecasts. And as Jerry Jordan rightly emphasizes, it will be very important that we not go too far. But in terms of what we know now, I don't think we want to give the impression that we see the end of this process. Some people may read the 50 basis points, despite what is in the federal funds futures market, as saying that we believe we are about at the end of our tightening. In my view, that would be a mistake since I don't think that's what the evidence suggests today.

I would also like to comment briefly on the vulnerability of the stock market. I think we all know that the stock market is still very elevated by historical standards and that the volatility in the market is really unprecedented. The NASDAQ has been more volatile this year than in the entire history of the index. The market is shaky. It is not going to help us if the market cracks. That would cause us a lot of trouble. I don't mean just political trouble; I mean trouble in carrying forward a monetary policy that does what we need it to do. So, I think having a policy that is well in line with what the market expects, while it certainly provides no guarantee, runs much less of a risk than if we surprise the market in a major way.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. I support both halves of your recommendation. Let me take just one minute to explain why. I think we are in the business here of trying to find a mini-max solution, if you will, to minimize the maximum regret we will have in terms of the effects of our actions on society and the economy. One way to do that is to support the market when the market is sending us clear signals. As I said in my earlier remarks, long-term inflation expectations have not gone up. I think the reason is that the market is expecting us to react today in a way that is consistent with the way they are looking at the long term. And we have in fact worked very hard during this intermeeting period to make sure we are not looking in a mirror--that we are looking at the right data and that the market is as well. This might not always be the case but at this stage the market is sending us a very clear signal that the appropriate move is 50 basis points with a statement of continued concern about inflation risks. To me the wisest course is to follow that signal. I think, as you pointed out clearly, that real long-term interest rates have to go up. In my view we would be in dangerous territory if we did not in fact support that, because otherwise we would be anchoring rates in a way that is inconsistent with where we really want to go.

I strongly support what President Jordan and President Poole said because I, too, am not sure how far this tightening process is going to go. But, fortunately, we are in a position where we only have to make decisions one meeting at a time. And for today's meeting I think 50 basis points and a balance of risks statement tilted toward inflation is the right policy.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. I support both parts of your recommendation as well, Mr. Chairman. I think we have to get rates higher and that aggregate demand and aggregate supply are just not balanced. There is still tremendous momentum on the up side and I think the balance of risks is still on that side. I do believe that at some point, perhaps not far from now, that Jerry Jordan will be right and the risks will begin to tip toward our overshooting. But if we have to respond to that, we can. For right now, I don't see it. I still think we have to go 50 basis points, with asymmetric language.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, it seems clear to me that we need to tighten policy further at this meeting, and I enthusiastically support your recommendation for a 50 basis point increase. I also believe that the balance of risks remains weighted toward higher inflation, and incorporating that view in the press release is for me an important part of the recommendation as well.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. I strongly support your recommendation for a 50 basis point increase and for a balance of risks sentence tilted toward higher inflation. I recognize that there is some uncertainty about how far we will need to go and I personally think we are going to have to do more.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Mr. Chairman, I support your recommendation and I do so enthusiastically. I would simply add the point that if in fact inflation expectations are now rising, this move of 50 basis points is really not that much more aggressive than the moves we have been taking up to this point. While some differences of opinion have been expressed

around the table about whether inflation expectations are indeed rising, I think there is some evidence that that is the case. So, I support both parts of your recommendation.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. I fully support the 50 basis point move at this meeting. My preference would be to say that with such a move the risks are balanced. But I recognize the risk that such a statement would be misinterpreted, and that would be undesirable in my view. But to my mind saying that the balance of risks is still tilted toward inflation also can be misinterpreted if the market's impression is that the decision at the June meeting is a foregone conclusion. I think that would be a mistake and it would be miscommunicating. I'm troubled by the concern over surprising the market because we do have to disappoint the market at times by not doing what it expects. We know that; we've done it many times before. I prefer to think of this as a situation where sometimes we will have to take an action and communicate in a way to educate the markets and get them to adjust to us rather than have us adjusting to the market. So, at least among us, if we are going to say that the balance of risks is tilted toward inflation and that the funds rate will be moved still higher, I wouldn't want to think about that in terms of the old tilt language. That is, I don't want the presumption to be that we are going to come back predisposed to another increase in June. I think it would be desirable to take a stronger action at some time and then be willing to give it more time to have the desired effects.

CHAIRMAN GREENSPAN. First Vice President Stone.

MR. STONE. Mr. Chairman, I support both parts of your recommendation. I think a larger action by the Committee today will forestall any rise in longer-term

expectations of inflation. And in my view, not moving the funds rate up 50 basis points probably would lead to long-term expectations of some increase in inflation.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Mr. Chairman, I support your recommendation. I do have to admit that I got to this decision by a rather different route than you did, but it is nevertheless good to end up with the same conclusion. I am concerned that our challenge is much more demanding than slowing the expansion to trend. The further increase in utilization rates and signs of building inflation pressures suggest that we are ultimately going to have to slow economic growth to below trend for a while. And until this process is much further along, there's a threat of continued upward pressure on inflation. I think the gradual approach we've been taking so far has been motivated by the possibility that our task might be a more limited one--just slowing the economy to trend--and also by the fact that until recently there hasn't been any sign of rising inflation. Moreover, we've had concerns or uncertainties about sustainable utilization rates. But I think it has always been clear that there were risks in the gradual approach. And the risks were that during the time we were trying to slow the expansion, the imbalance between actual and potential output would become still worse and the threat of inflation would become more of a reality.

It seems to me that with a more aggressive policy action of 50 basis points today the risk of a policy mistake is much smaller than with a more gradual policy response. What we're doing in some sense today is moving forward a rate increase that in any event we likely would have implemented in the near term. So, we don't have to have any larger cumulative increase in interest rates than we otherwise would have had, but we put ourselves in a position to implement a larger cumulative rise if it turns out to be justified. Thank you.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. I support your recommendation, Mr. Chairman, for all of the reasons that have been stated around the table.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. I, too, support your recommendation. I think we may be seeing some incipient signs of slowing in the economy but I don't think it's enough. Our own forecast and the Greenbook forecast say that the slowing will not be enough. Also, I see the 50 basis point move, while different from the moves we have been making, as consistent with them. We have reached a point in time when that is an appropriate action because of developments in the market. I disagree a little with President Poole on the volatility and the downward trends that we've seen in the market. The fact is that other things have demonstrably not fallen out of bed at the same time--maybe they will down the road--but I don't get a sense that the volatility and market downturns are having a major impact in a real sense on the economy. So, I think we have some opportunity to act without fear of unsettling the market, whereas earlier I was in favor of a gradual approach to tightening because of concerns about the market and market volatility. Now that we've seen a bit of that and bad things haven't happened, we have a window of opportunity during which we can move the funds rate up and send a consistent message that the risks are still on the up side.

I think we should limit our statement to the usual language as much as we possibly can, saying that the risks are tilted toward inflation in the foreseeable future, and not give anybody room to play with the interpretation of what we meant by this word or that word. I'd continue with a consistent approach toward tightening monetary conditions and be always watchful for signs of incipient slowing.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. I'm fully comfortable with your recommendation in all its aspects and I share the thinking that real interest rates should be going up from here. Let me just add one other thought, which is that I assume we will be open-minded about where we are going to go next and at what pace. One reason I think we want to maintain that stance is the point I alluded to earlier, namely my own uncertainty about the inflation outlook. I'm not persuaded, especially with this action, that we're going to confront a significant acceleration of inflation. I say that in part because we in Minneapolis have been looking for the effects of labor market tightness and its correlation to future inflation--not only in the last several years but we've taken this back empirically for quite some time, and we can't find evidence since about 1984 that labor market variables make a significant contribution to forecasting inflation. I'm not entirely sure what we ought to conclude from that, but one thing we certainly ought to conclude is that we should be cautious as we think about what has happened in the economy and its implications for the future.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. While I would have preferred 1/4 point, I can also agree to 1/2. Looking forward, I would just remind us that this afternoon the prime will go to 9-1/2 percent, and that's getting close to that psychologically important double-digit level.

CHAIRMAN GREENSPAN. Well, we can revise our method of estimating and reporting it to a monthly basis! The majority appears to be in favor of 50 basis points with the balance of risks sentence toward inflationary pressures. Would you read the directive that would capture that?

MR. BERNARD. I'll be reading from the Bluebook page that unfortunately did not make its way into the Bluebook. [Laughter] "The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee in the immediate future seeks conditions in reserve markets consistent with increasing the federal funds rate to an average of around 6-1/2 percent"

The "balance of risks" sentence would be as follows: "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.

MR. BERNARD.

Chairman Greenspan	Yes
Vice Chairman McDonough	Yes
President Broaddus	Yes
Governor Ferguson	Yes
Governor Gramlich	Yes
President Gynn	Yes
President Jordan	Yes
Governor Kelley	Yes
Governor Meyer	Yes
President Parry	Yes

CHAIRMAN GREENSPAN. I'd like to adjourn the FOMC meeting temporarily while the Board of Governors goes into my office to confront requests from several of your Banks on the discount rate.

[Recess]

We are back in session. I'll just announce to your great surprise that the Board of Governors voted to move the discount rate up 50 basis points. Is the draft press release that was just circulated satisfactory?

SEVERAL. Yes.

CHAIRMAN GREENSPAN. Thank you. In that event, shall we adjourn for lunch?

MR. BERNARD. President Boehne has arrived.

END OF MEETING