

**Meeting of the Federal Open Market Committee on
August 9, 2005**

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., at 9:00 a.m. on Tuesday, August 9, 2005. Those present were the following:

Mr. Greenspan, Chairman
Mr. Geithner, Vice Chairman
Ms. Bies
Mr. Ferguson
Mr. Fisher
Mr. Kohn
Mr. Moskow
Mr. Olson
Mr. Santomero
Mr. Stern

Messrs. Guynn and Lacker, Ms. Pianalto and Yellen, Alternate Members of the Federal Open Market Committee

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

Ms. Danker, Deputy Secretary
Ms. Smith, Assistant Secretary
Mr. Alvarez, General Counsel
Ms. Johnson, Economist
Mr. Stockton, Economist

Messrs. Connors and Madigan, Ms. Mester, Messrs. Rosenblum, Tracy, and Wilcox, Associate Economists

Mr. Kos, Manager, System Open Market Account

Mr. Struckmeyer, Associate Director, Division of Research and Statistics, Board of Governors

Messrs. Clouse and Whitesell, Deputy Associate Directors, Division of Monetary Affairs, Board of Governors

Messrs. English and Gagnon, and Ms. Liang, Assistant Directors, Divisions of Monetary Affairs, International Finance, and Research and Statistics, respectively, Board of Governors

Mr. Skidmore, Special Assistant to the Board, Office of Board Members, Board of Governors

Mr. Small, Project Manager, Division of Monetary Affairs, Board of Governors

Mr. Wright, Section Chief, Division of Monetary Affairs, Board of Governors

Mr. Luecke, Senior Financial Analyst, Division of Monetary Affairs, Board of Governors

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

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

Mr. Judd, Executive Vice President, Federal Reserve Bank of San Francisco

Messrs. Hakkio, Rasche, and Sniderman, Senior Vice Presidents, Federal Reserve Banks of Kansas City, St. Louis, and Cleveland, respectively

Ms. Mosser and Messrs. Porter, Tallman, and Tootell, Vice Presidents, Federal Reserve Banks of New York, Chicago, Atlanta, and Boston, respectively

Mr. Weber, Senior Research Officer, Federal Reserve Bank of Minneapolis

Mr. Hetzel, Senior Economist, Federal Reserve Bank of Richmond

**Transcript of Federal Open Market Committee Meeting on
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CHAIRMAN GREENSPAN. Good morning, everyone. Dino, please start us off.

MR. KOS.¹ Thank you, Mr. Chairman. I'll be referring to the charts in front of you.

During the intermeeting period, market participants confronted the surprise Chinese revaluation, strong domestic data, and high oil prices. On net, the result in the market was higher yields and equity prices.

The top panel of the first page graphs the December 2005 and December 2006 eurodollar deposit futures contracts. Earlier this spring, the implied rates on these contracts had been coming down and the spread between the '05 and '06 contracts was narrowing, as most market participants thought the end of the tightening cycle was approaching. But during the intermeeting period, rates rose sharply and the calendar spread widened. The strong data and some reassessment about inflationary pressures suggested to many in the market that the Committee will continue to tighten beyond the so-called neutral rate—whatever that is.

Longer-term yields rose steadily in nearly a straight line since the last meeting, as shown in the bottom panel. Since June 30, yields on 2- and 10- year Treasuries rose about 45 basis points. Essentially, the curve had a parallel shift higher and the shape remained unchanged. That dimmed slightly, but did not silence, the chatter about inverted yield curves observed in the last period.

Despite the rise in yields, risk appetites in credit markets remained strong and the search for yield remained intact. The top of page 2 graphs the option-adjusted spread for 30-year mortgage-backed securities (MBS). That spread is slightly wider than earlier this year but remains low by historical standards. As yields move in either direction, this is one market that investors—and for that matter we at the Desk—tend to watch closely, given the accelerating effects that convexity hedging can have. However, even if yields continue higher, there are reasons to expect that, at least under current conditions, MBS-related hedging will play a lesser role.

First, mortgage convexity is concentrated in traditional 30-year fixed-rate mortgages and MBS. Right now 70 percent or more of the 30-year fixed MBS universe have coupons below current rates and thus are already “out of the money” to be refinanced. (The top right chart shows the distribution of outstanding 30-year MBS.) As a result, further increases in long-term rates will likely have only a small impact on hedging needs going forward.

¹ The materials used by Mr. Kos are appended to this transcript (appendix 1).

Second, the shift in issuance to hybrid and other adjustable products has reduced the overall need to hedge convexity for new MBS products.

And third, those who do hedge mortgage convexity are more likely to hedge up front with interest rate options and less likely to hedge dynamically with swaps or Treasuries. The low level of implied volatility has made it cheap to buy interest rate options for hedging, and several mortgage hedgers have increased their use of option hedges after their dynamic hedging strategies produced poor results in the summer of 2003.

Finally, there has been some shift at the margin among the holders of MBS from those who hedge actively to those who probably do not. As shown in the bottom left panel, the two major housing GSEs [government-sponsored enterprises]—which do hedge actively—have seen their portfolios level off or shrink outright.

Meanwhile, one group that has been accumulating MBS is foreign official accounts. The bottom right panel graphs aggregate holdings of GSE securities held by foreign accounts at the New York Fed since January 2002. Despite the accounting and management problems at both major GSEs, central banks kept buying GSE securities over the past few years; their overall holdings more than doubled to over \$360 billion. Most of those holdings are direct obligations. But MBS, which were essentially zero only two years ago, now make up about \$66 billion, or almost 20 percent of agency holdings. Moreover, this number probably understates total central bank holdings of MBS since some central banks have outsourced management of their MBS portfolios to external managers who use other custodians.

Moving to page three, the corporate market recovered very quickly after its springtime jitters. The top right panel shows the high-yield spread, which has narrowed by more than 100 basis points since early May. Taking a longer-term time frame, as shown in the top left panel, even at recent peaks spreads are at very low levels.

While spreads are narrow, quality has shown some signs of deterioration. The middle panel graphs for 1987 through 2005-to-date the percent of high-yield issuance comprised of securities rated at B- or lower at the time of issuance. In the past year, roughly 40 percent have been in this category, exceeding the levels seen in early 1998 and also in the late 1980s during the junk bond boom. The use of those proceeds is shown in the bottom panel. After several years of focusing on balance sheet repair, mainly through refinancing, issuers are getting a bit more aggressive. Let me draw your attention to the red bar at the bottom of the stack. So far in 2005, about 20 percent of issuance has been used to finance leveraged buyouts—the highest that number has been since 1989.

Moving overseas, the picture was mixed. In the euro area, economic data were, at the margin, somewhat better than had been expected. Those improved data and statements by ECB [European Central Bank] officials that they were not contemplating an easing of policy shifted sentiment in euro area money markets. As shown in the top left panel on page 4, the 9-month forward rate agreement on 3-month euro deposits—the solid green line—rose sharply and unwound the ease that had been priced into markets around the time of the last FOMC meeting. The ECB has now maintained its key policy rate at 2 percent for 26 consecutive months.

In contrast, the Bank of England eased policy by 25 basis points last week, as expected. And as shown in the top right panel, another easing is expected.

In Asia, the Chinese revaluation was the most noteworthy news event, even though, overall, the price action in regional markets was tame. Ex ante, the currency that was expected to appreciate the most if China were to move was the Japanese yen. And on the day of the Chinese announcement, the yen rose sharply. But that was quickly unwound and—as shown in the middle left panel—the yen remains broadly weaker compared to its level at the beginning of the year. Japanese exporters, who reportedly are using a reference rate of ¥105, are feeling very comfortable with the yen at these levels.

With data such as this morning's strong machinery orders suggesting that the Japanese recovery is intact, equities and JGB [Japanese government bond] yields have both been rising. The 10-year JGB yield has risen to about 1.4 percent. The failure of the Diet to approve the postal reform bill and the upcoming elections will add some uncertainty in coming weeks, though most market participants are no longer questioning the recovery even if deflationary pressures on prices persist.

The bottom panel shows the Chinese yuan spot rate since May 9 in black and the 1-, 6-, and 12-month NDF [non-deliverable forward] rates over the same period. The July 21 revaluation announcement caught the market by surprise. However, the small 2.1 percent revaluation, the vague nature of the new regime, the virtually fixed rate versus the dollar since July 21, and finally the July 26 announcement by the People's Bank of China that this was not the "first step" of a broader revaluation took the wind out of the sails of those expecting more forceful measures. Indeed, the longer-term NDF tenors are virtually unchanged from levels prevailing before July 21. Other regional currencies also appreciated briefly but, with the exception of the Malaysian ringgit, those moves have been largely unwound.

Turning to domestic operations, I wanted to briefly update the Committee on the growth of SOMA [System Open Market Account] in the first half of 2005. The top chart depicts the growth of SOMA's outright holdings in half-

yearly increments since 2000. So far in 2005, SOMA has expanded by only about \$7 billion, the slowest growth since the first half of 2000, a period that was distorted by Y2K effects. And, given the rising base, in percentage terms the slow growth of SOMA is even more pronounced.

The bottom panel graphs the autonomous factor changes over those same six-month intervals. The relationship between net factor movements and SOMA growth is not one-for-one but over longer periods the two track each other. The notable features of the first six months in 2005 are the slow growth of currency (in green) and the reduction of required operating balances (in blue).

Finally, let me say a word about our foreign reserves. Earlier this year I reported on my plans to shift investment of the System's and the ESF's [Exchange Stabilization Fund] yen reserves from Treasury bills to a portfolio of JGB investments and deposits at the Bank of Japan. You will recall that the Japanese t-bill market had become illiquid and, in my view, no longer suitable for a reserve portfolio. After making the necessary system and procedural changes, we recently started the process of rolling off maturing t-bills and investing the proceeds into JGBs and BOJ deposits.

Mr. Chairman, once again there were no foreign operations in the period. I will need a vote to approve the domestic operations.

CHAIRMAN GREENSPAN. You raised the issue of the questionable efficacy of the dynamic hedging engaged in by Fannie and Freddie earlier this year or last year—I've forgotten exactly when. I don't recall it being both GSEs, and I wasn't quite clear whether that was just a general rumor or what. Is that now confirmed?

MR. KOS. Well, I actually had a different institution in mind—a very large player in this market who did have some issues in '03. And they have now changed their hedging strategies.

CHAIRMAN GREENSPAN. I understand that. You weren't referring to something new; you were referring back to the original problems.

MR. KOS. Yes.

CHAIRMAN GREENSPAN. Did they ever acknowledge that that was a problem?

MR. KOS. Well, a fact is something that can be observed and verified, and I'm talking—

CHAIRMAN GREENSPAN. No, I realize that. But as far as I know, they have never acknowledged that dynamic hedging did not work for them at that time.

MR. KOS. Well, let's put it this way: Some institutions do it better than others, and there were some institutions that didn't do it very well in '03. Patricia, do you want to add something?

MS. MOSSER. Yes, I think that's exactly right. The one GSE that had relied historically on a lot more—

CHAIRMAN GREENSPAN. Just because he is running for governor or something like that, you don't have to be that diplomatic. [Laughter]

MS. MOSSER. The one GSE that traditionally had done a lot of dynamic hedging had already started, even in 2003, to shift over to more options hedging. But a couple of depository institutions did not make such a big switch. For one particularly large firm, the results of poor dynamic hedging showed up in their operating results, and by all reports they have since "gotten religion," shall we say. And in part that's because it has been inexpensive to hedge with options in the last couple of years.

CHAIRMAN GREENSPAN. Well, as far as you can judge, in the mortgage market has there been a significant reduction in the proportion of dynamic relative to passive hedging that has occurred subsequent to that episode? And has it stayed down?

MS. MOSSER. Yes.

CHAIRMAN GREENSPAN. Is there much dynamic hedging going on at all?

MS. MOSSER. There is some. Almost everyone dynamically hedges some portion of their convexity. Certainly, mortgage servicers still do some dynamic hedging, as do the GSEs. And hedge funds and fixed income funds that hold mortgages do some dynamic hedging. So there is some, but it's a substantially lower proportion than it was three years ago.

CHAIRMAN GREENSPAN. Going from passive to dynamic hedging, if you do it right, does enhance the bottom line. And it could be significant, so that the attraction is really quite strong. Well, I think I've squeezed about as much as I'm going to get out of you on that.

[Laughter]

Second, regarding the pickup in mortgage-backed security holdings by foreign central banks, it's quite evident that the holdings of the GSE debentures are in lieu of U.S. Treasury securities and they are held solely because of the extra yield. I know that explicitly. It's not a question; they've told me that. Indeed, they've asked me: "Are these guys okay, so I don't have to worry about them?" But how do they view mortgage-backed securities? Do they view them as merely Treasuries with a higher yield? I assume that the MBS they're holding are Fannie or Freddie guaranteed, not private conduits.

MR. KOS. Right.

CHAIRMAN GREENSPAN. Do we know that?

MR. KOS. Yes, because all of these securities are on Fedwire. We as custodians are not holding any physicals or other white labels that are not on Fedwire. So these would all be Freddie, Fannie, or Ginnie, but in fact, they are mostly Fannie and Freddie.

CHAIRMAN GREENSPAN. They don't hold Ginnies; it doesn't help that much. Do you get the impression that the mortgage-backed securities are in lieu of U.S. Treasuries? Do the central banks tell you anything?

MR. KOS. I think in part there's a diversification effect going on because some of these central banks have such large reserves that they have expanded out the risk curve. So they've expanded their holdings from Treasuries to agency securities to MBS to corporate bonds, and some even to equities and ABS [asset-backed securities]. Actually, some of the central banks

with very large reserves have expanded their asset classes quite a bit. So it's hard to disentangle how much of that is a substitution for Treasuries and how much reflects just an effort to get a more diversified portfolio.

CHAIRMAN GREENSPAN. Well, if you have a GSE guarantee of an MBS, for example, why does it sell at as much of a spread above debentures of the GSEs? Is the option to refinance the whole difference?

MR. KOS. It's the optionality. It's the unpredictability of when you get your cash back.

CHAIRMAN GREENSPAN. So it's no credit risk differential.

MR. KOS. I would not see it that way.

CHAIRMAN GREENSPAN. All right. I noticed you made a particular point of the solemn statement by the People's Bank of China that the July 21 move was not the first step in a series of changes. Doesn't that strike you as what a Finance Minister would say when asked the question, "Mr. Finance Minister, are you about to revalue?" [Laughter] There was no other statement the authorities could make for fear of getting a huge inflow of funds. As you remember, originally they characterized it as an initial step and they backed away from it. Which do you believe?

MR. KOS. Well, the market thought that the July 21 move was a first installment, and they were encouraged to believe that by some of the initial statements. And then in the July 26 statement they did an about-face.

CHAIRMAN GREENSPAN. But I'm asking: Why does the July 26 statement have any value whatsoever? It's a perfectly obvious thing to say if you're a central banker, even if you're preparing to revalue six months later, or three months later, or any time.

MR. KOS. Well, I think the July 26 statement basically sent a signal that there wasn't going to be as much flexibility as the market thought.

CHAIRMAN GREENSPAN. All you've got to do is watch the actual transactions.

MR. KOS. Right, and very little movement or shift has occurred. So I think the markets are saying that this is either a basket of one [laughter] or it's a basket where the dollar is 95 percent of the basket and that's really what they're targeting.

CHAIRMAN GREENSPAN. Or the market could do correlations of the dollar against all other currencies and then presume the basket consists of all those in which the R^2 is above 0.9. [Laughter] Governor Bies.

MS. BIES. I wanted to follow up on your comments about mortgage hedging. I'm hearing concerns that there is increased hedging activity for servicing rights on the new option ARMS. To the extent that they are servicing rights, the risk is the prepayment risk, and historically banks have found it very hard to come up with any kind of hedging model against prepayments on ARMs. So this could be a hit to earnings of banks that are building up big portfolios of this—and it involves the servicing rights, not carrying the loan in the portfolio. Are you hearing of anybody trying to hedge that prepayment risk?

MR. KOS. Trish?

MS. MOSSER. They're trying to model it. I don't know if they have found any good ones; you're absolutely right about that. These products have not been widely used; they've tended to be used by a narrow segment until fairly recently. ARMs do have different prepayment characteristics. I know from what I've read from the folks who sell the models that they are working to improve their ARMs models to help with the hedging. But at this stage it's not as straightforward as buying an interest rate option on a long-term fixed-rate mortgage where

there's sort of a natural hedge in a natural market. I don't think there's much likelihood in the near term of a prepayment shock to the servicers, but in a year or two the possibility is probably fairly significant.

CHAIRMAN GREENSPAN. Isn't that a costly hedge, given the indeterminacy of the behavior of some new product such as that? The prepayment pattern is virtually unknown.

MS. MOSSER. It is. That's exactly right. They do the best they can with the limited history and information they have from the way the market has behaved in the past. But it has not been a very big market because a lot of these weren't securitized until fairly recently, so they weren't priced very well. Therefore, unless you have a history in the business and have your own internal model, it's extremely difficult to figure out how prepayments are going to behave.

CHAIRMAN GREENSPAN. The big question is who is buying the securitized versions of these. I can understand that there are originators who get the fee and then sell it on to X. I always wonder: Who is X?

MS. MOSSER. From the little information that we have gathered, it's a fairly wide array of investors—from hedge funds to a very large number of international investors. I don't know if central banks are buying these, but—

MR. KOS. Well, if you package something with a lot of yield, there are buyers out there waiting for that.

MS. MOSSER. Exactly. That's true.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. To move from the mortgage-backed market to Treasuries, there was an interesting article over the weekend regarding a squeeze on the 10-year note. I'm wondering what you have seen on that and what you think about it.

MR. KOS. Yes, there have been a couple of articles in the last two days about that situation. In my view, that particular article in the *New York Times* was somewhat exaggerated and had some facts wrong. That said, the cheapest-to-deliver into the contract in June was very tight. But to conclude that there was a squeeze as a result is probably going too far, based on the evidence. The issue here is that the futures are very, very large. The cheapest-to-deliver contract is a finite-sized Treasury. As you know, this sort of Treasury issuance has not increased over the last few years, while the number of people trading and the volume of trading have increased. So there is this imbalance that we saw a few months ago in another futures case, and we may see more of it because of the way the contracts are structured. Brian has done some work on this as well. I don't know if you have anything to add, Brian.

MR. MADIGAN. I think that's right. This has been an evolving pattern over the past several futures settlements. There was a pattern in the last few months of pronounced tightness in the particular issue that we're talking about, which is the February 2012 note. And it is the case that currently the cheapest-to-deliver issue into the September contract has an even smaller outstanding size. So this situation will bear some watching.

MS. MINEHAN. Does that have any implications for where the 10-year rate is on the yield curve?

MR. MADIGAN. Yes, potentially. These issues that enjoy a lot of "specialness" in the repo market because they can be financed cheaply tend to trade noticeably below the yield curve, at least at times.

MR. KOS. It's a few basis points. It can be five to ten basis points, which at one level is a lot. At another level, it's merely the market forces at work.

MS. MINEHAN. So you think it's a supply issue and not comparable to the Salomon Brothers situation where there was some actual desire to keep stock off the market.

MR. KOS. Well, at core, I think it's a supply issue. By the same token, that doesn't mean you won't have people trying to take advantage of that.

MS. MINEHAN. Right. I notice that the Treasury is looking into it.

MR. KOS. But there's no evidence that I'm aware of that there was anything of the kind of situation that Salomon presented a few years ago.

CHAIRMAN GREENSPAN. Further questions for Dino? If not, would someone like to move to ratify the transactions? Vice Chair.

VICE CHAIRMAN GEITHNER. So moved.

CHAIRMAN GREENSPAN. Without objection, they are approved. We'll turn now to David Wilcox and Karen Johnson.

MR. WILCOX. Thank you, Mr. Chairman. A corollary to Murphy's law is that the biggest forecast errors on an employment report always occur when the report comes between Greenbook publication day and the FOMC meeting. [Laughter] Last year, in an event that undoubtedly is seared more into my memory than yours, the corollary held true. This year, in the biggest surprise of all, there was no surprise, and I am in the unexpected position of being able to report that the August Greenbook forecast has survived the incoming data a grand total of five days and counting. In that regard, I should note that this morning's release on productivity and costs came in very much in line with our expectations.

A colleague correctly observed that there are a lot of moving pieces in this forecast, so I thought you might find it helpful for me to review what some of those pieces are.

The first has to do with the implications of the annual revision to the national income and product account [NIPA] data. As you know, the BEA [Bureau of Economic Analysis] took down its estimate of the level of real GDP in the fourth quarter of 2004 by 0.9 percent. In response, we moved down our estimate of potential GDP by an identical amount. Thus, all else equal, we would have shown the same GDP gap at the end of 2004 in this Greenbook as we did in the June Greenbook.

But not quite all else was equal. In work unrelated to the NIPA revisions, we refined our model of the labor force participation rate so that we could extend our estimate of the trend in that variable backward in time on a methodologically consistent basis. As it happened, those refinements to the model steepened the downward tilt in the trend by enough to subtract a couple of additional tenths from the level of potential GDP by the end of last year, leaving the GDP gap at 0.9 percent rather than the 1.1 percent that we had shown in the June Greenbook.

The second moving piece has to do with the growth of potential GDP going forward. One implication of the revision to the national income accounts is that the capital stock is likely to grow more slowly over the forecast period than we had earlier believed. Accordingly, capital deepening should make a smaller contribution to the growth of potential GDP; indeed, we have cut that contribution by a quarter of a percentage point this year and next. So on the supply side, the basic summary is this: a slightly smaller gap as of the end of 2004, and somewhat slower growth of potential GDP going forward.

The third moving piece has to do with the demand side. We read the data that were released during the intermeeting period as suggesting that the economy has somewhat more forward momentum in the near term than we had anticipated in the June Greenbook. You might not know it from top-line real GDP growth in the second quarter, which was only about a quarter of a percentage point stronger than we had anticipated, but the composition of growth pointed to greater strength. In particular, inventory investment stepped down much more sharply in the second quarter than we had expected. As best we can tell, most firms outside the motor vehicle industry are satisfied with their current inventory positions, and so will see no need to pare the pace of inventory investment to anywhere near the same degree as they did during the first half of the year. If they manage to maintain their inventory investment at the second-quarter pace—as is anticipated in our forecast—they will, at one and the same time, keep the inventory-sales ratio moving down in line with its long-term trend and add more than a percentage point to the acceleration of real GDP between the second and third quarters.

The underlying pace of final sales also looks a little stronger to us now than at the time of the June Greenbook, but not by much. A good deal of the second-quarter surprise was in net exports, and we do not expect that unanticipated strength to be carried forward. As for domestic final demand, the second-quarter surprise was very modest. To be sure, the recent pace of motor vehicle sales is eye-popping, but the bulk of that demand is being met out of inventories. And, in any event, we have assumed that the piper will have to be paid as far as those sales are concerned. Despite the extension of the employee discount programs, we have sales dropping back in August and September from the 20 million rate reached in July—on the theory that many consumers

probably believed the automakers the first time around when they said the discount offers would expire—and we have the payback continuing into the fourth quarter. Aside from net exports and motor vehicle sales, our outlook for private domestic final demand is hardly revised, on net, over the last three quarters of this year.

A fourth moving piece has to do with inflation. The information we received during the intermeeting period presented a mixed picture relative to our expectation in the June Greenbook. On the one hand, the most recent readings on core market-based PCE [personal consumption expenditures] price inflation have been encouraging, and they have caused us to mark down our estimate of inflation in this category $\frac{1}{2}$ percentage point in the second quarter and nearly that much in the third quarter. On the other hand, we have a good deal more energy price inflation in this projection, which contributes directly and in full force to the overall PCE inflation rate, and seeps through as well—to the tune of 0.1 percentage point—into core inflation next year. And we also have less restraint in this projection from any gaps in resource utilization. On balance, though, we see these factors as fighting each other to a draw, leaving our projection for core market-based inflation unrevised from the last Greenbook.

However, that was not the end of the inflation story. A consequence of the annual revision was that nonmarket prices now are on a steeper upward trajectory than before. In our projection, we have assumed that inflation in this component will average roughly 3 percent going forward, rather than 2 percent as we had assumed in the June Greenbook. Because this component has a weight of 20 percent in the core PCE price index, the increment of 1 percentage point to the rate of growth of this component in our projection adds 0.2 percentage point to our projection for core PCE inflation.

The last moving piece has to do with monetary policy. Against the backdrop of somewhat slower growth of aggregate supply, greater near-term thrust in aggregate demand, and a somewhat higher rate of inflation in core PCE prices, we shifted up the assumed trajectory for the funds rate 50 basis points essentially throughout the forecast period. On our current assumptions, we have the funds rate leveling out at $4\frac{1}{4}$ percent in the middle of next year. Evidently, private-market participants share at least some of the same reactions to the incoming data, as they have marked up funds rate futures prices by almost exactly the same amount.

The adjustment to the policy assumption was important for presenting you with a forecast broadly consistent with your policy objectives. Had we left the funds rate assumption unchanged at its June trajectory, output would have been above its potential in 2006 and 2007, and core inflation would have been running at 2.2 percent in those two years, and edging up rather than down.

One of the many questions confronting you is how you should react to this change in the inflation outlook. Are inflation pressures unchanged, on net, from last time, as indicated by our outlook for the core market-based component? Or are they more intense than before, as indicated by our outlook for the official core PCE price index including the nonmarket component, and the overall PCE index? It seems to me that the answers to these questions depend on what you are trying to control, and the time frame over which you seek to impose that control.

If you see yourselves as controlling the overall PCE price index, and you aim to bring that measure back into line with your policy objective within a small number of years, then you would probably regard inflation pressures as having worsened since the June Greenbook, mostly because of the greater direct contribution of energy prices to top-line inflation, but also because of the faster pace of increase of nonmarket prices.

At the other extreme, if you see yourselves as controlling the core market-based index, then you would probably judge no material change to have taken place in inflation pressures since the June Greenbook, based on the simple observation that our outlook for this measure of inflation has not been revised.

Perhaps the toughest case is the intermediate one, in which you see yourselves as controlling core PCE inflation, including its nonmarket component. In this case, if you regard the nonmarket component as bearing no relationship to reality, then you might insulate your policy from the change in BEA methodology by marking up your target inflation rate by 0.2 percentage point—equivalent, in effect, to controlling the market-based component. On the other hand, if you think the nonmarket price index might convey some useful information—perhaps not from quarter to quarter or even from year to year, but at least over the intermediate term—then you would probably be inclined to adopt a tighter monetary policy in response to the change in measurement methodology. This is the assumption implicit in the Greenbook.

One last point on which I should be clear: On our estimates, the monetary policy assumption we adopted for purposes of this Greenbook is sufficiently restrictive to keep actual and potential output in approximate balance and to put core PCE inflation, even including the upward-revised nonmarket component, on a slightly downward-sloping trajectory. Indeed, as best we can tell, $4\frac{1}{4}$ percent on the funds rate is slightly more than enough, in the long run, to keep inflation heading downward, and after a few years at that level, the funds rate could be brought back down to 4 percent. This is not a monetary policy that acquiesces, in the long term, to inflation continuing to run at 2 percent, but rather aims to nudge it down, little by little, into the neighborhood of $1\frac{1}{2}$ percent. In this respect, the monetary policy in the current Greenbook is very similar to the one in the June Greenbook. In both cases, policy nudged the

inflation rate down to 1½ percent; but also in both cases, many years were required before that lower level was attained.

Karen Johnson will continue our presentation.

MS. JOHNSON. The staff outlook for real GDP growth abroad is little changed this time from that in the June Greenbook. Economic expansion in our foreign trading partners has rebounded from its subdued first-quarter pace, and we expect that it will firm somewhat more later this year and next.

Nevertheless, three elements of our baseline outlook this time are sufficiently changed from the previous forecast that they warrant attention today: first is the very sizable, positive change that recent data have implied to the contribution to U.S. real GDP growth from the external sector; second, the long-awaited announcement by Chinese officials of a change in their exchange rate regime; and third, yet another discrete upward revision in our projection for global oil prices.

We now estimate that net exports made an arithmetic positive contribution of 1.4 percentage points to real growth in the second quarter, a figure slightly less than that reported by the BEA in the advance real GDP data for the quarter. With June nominal trade data yet to be released, both the BEA and we must guesstimate that number in constructing a second-quarter figure for real GDP. Our estimate of the contribution is now significantly larger than the 0.55 percentage point that we had incorporated into the June forecast. The nominal trade data for May surprised us with stronger exports and a bit weaker imports than we had anticipated. These data account for 0.5 percentage point of the revision. The remainder of the revision to the contribution owes to a markdown of imports in line with the advance NIPA data, which contained a different translation gap between the balance of payments data and the national income data than that for Q1, which in turn had been the basis of our projection.

The overall revision to second-quarter imports is somewhat greater than that to exports. We now estimate that real imports of goods and services actually declined in the second quarter whereas real exports grew at over a 12 percent annual rate; very strong nominal exports in April were followed by even slightly larger exports in May.

Over the forecast period, we expect that real imports will resume growing, at an annual rate of about 6 percent. Positive but slowing impetus from U.S. output expansion largely explains the growth of imports, with relative prices switching from being a small drag to providing a slight boost to core imports. We project that real export growth will step down in the second half of this year and a bit more next year, to rates more in line with stimulus from output growth abroad and diminishing impetus from dollar depreciation over the past three years. All in all, the contribution from the external sector reverts to negative

this quarter in our baseline forecast and is about minus 0.4 percentage point over the next year.

The July 21 announcement by Chinese officials of a change in their exchange rate regime ended speculation about when such a move would come but left many other questions unanswered. Following the initial 2.1 percent revaluation of the renminbi in terms of the dollar, the exchange value of the Chinese currency has fluctuated very narrowly. Essentially no information has yet been provided about the composition of the “reference” basket of currencies that is now part of the regime. Scope has now apparently emerged for future moves in the exchange rate in terms of the dollar, but some official statements have emphasized that such further change will be gradual.

To construct our forecast of activity abroad, we needed to make a specific assumption about the Chinese exchange rate regime going forward. Holding the renminbi pegged at its current dollar exchange rate seemed to give too little recognition to the major step we thought was implied by the announcement. But we saw as arbitrary any specific projection we might make of further bilateral appreciation of the renminbi against the dollar. Accordingly, we chose to harmonize our treatment of the renminbi and most other currencies. For the purposes of the forecast, we have projected that the renminbi will appreciate slightly in nominal terms—at a rate comparable to that we project for the euro, the yen, the Canadian dollar—and have made small adjustments to other Asian emerging market currencies as well.

This trend nods in the direction of the downward pressure that we judge will at some point be visible on the dollar as a result of the financing burden of our growing external indebtedness. We realize that when it occurs this pressure is not likely to be evenly distributed across all bilateral dollar exchange rates with other currencies. Nor is it likely to occur smoothly and gradually over time. However, we do expect that the real index of the dollar in terms of all our important trading partners is likely to move down on balance over a reasonably long horizon because of global imbalances. Adding the renminbi into that mix has resulted in a slightly more rapid rate of real dollar depreciation than we had previously been incorporating into the staff forecast.

The spot price of West Texas intermediate (WTI) crude oil moved up over the intermeeting period to exceed \$61 per barrel on August 4 as the Greenbook was completed and has risen further in the days since then. The prices of oil futures contracts with more distant expirations have surged as well. This most recent run-up in spot WTI prices has been accompanied by a widening in the spread between that price and the prices of heavier, more sour, crudes. This WTI premium is expected to unwind, but not immediately, resulting in a forecast for the U.S. oil import price that is little changed on average over the second half of this year but is more than \$3 higher in 2006 than we had projected in the June Greenbook.

Various factors appear to have contributed over the past six weeks to the upward pressure on oil prices; most of them relate to risks to the available supply reaching the market. Destruction by fire of a large oil platform owned by India was particularly important because it provided light, sweet crude. The death of Saudi Arabian King Fahd appears to have raised political risks in the world's largest oil exporter, even though the new king, Abdullah, had been managing most of the kingdom's business during the 10-year illness of the late king. Warnings of an unusually active hurricane season have raised concerns about a possible repeat of the kind of supply interruptions experienced last year. Other issues of regular maintenance or delays in completing new sources of supply have arisen as well.

These various events all occurred against a background of perceived strong world demand and little spare capacity. Possible political risks are seen as creating uncertainty with respect to supply from Iraq, Iran, Venezuela, Russia and other global trouble spots. In the event of any serious disruption in such a trouble spot, there is little scope for other sources of supply to fill the resulting excess demand. As a result, market participants see little likelihood that prices will decline in the future. The far-dated contract for delivery in December 2011 is up to \$59 per barrel.

To date, the global economy has absorbed the rise in prices with few signs that overall economic activity will ease off in response. Higher oil prices have boosted consumer price inflation in some regions. However, inflation expectations appear to remain well anchored, and our baseline forecast calls for CPI inflation abroad to recede a bit next year. This projection depends importantly on oil prices remaining elevated but flattening out early next year, as anticipated in the futures curve. Renewed upward pressure on global oil prices remains a risk to the forecast, however, as higher oil prices for consumers tend to erode domestic demand in importing countries and regions, and oil exporters take some time before increasing their expenditures.

David and I will be happy to answer any questions.

CHAIRMAN GREENSPAN. David, what's the latest weight for the nonmarket component of core PCE?

MR. WILCOX. It's about 20 percent.

CHAIRMAN GREENSPAN. I know in the CPI it's of the same category or even larger, so to speak. But is there any question about the weight of that? Is it generally accepted as the right number? It's a very big number.

MR. WILCOX. It is a very big number. These nonmarket elements are, I think, by definition not included in the CPI.

MR. STRUCKMEYER. Correct. Most of them are not in the CPI.

CHAIRMAN GREENSPAN. I was merely referring to the owners' equivalent rent and that sort of thing, which is the same type of calculation.

MR. WILCOX. Well, owners' equivalent rent for this purpose is defined as a market component even though it, too, was imputed by the BEA. In general, our clear preference is for the weighting scheme embodied in the PCE price index as opposed to the consumer price index. We think that gives a more realistic portrayal of the market basket.

CHAIRMAN GREENSPAN. The revisions they made are huge.

MR. WILCOX. They are. For better or for worse, the fact is that they mostly have the character of correcting something that involved either an error or a miscommunication. In one case, it was clearly just a coding error in the computer code for medical services. In the other case—which the BEA doesn't quite portray as an error—it was an errant trend apparently introduced by some miscommunication between a supervisor and an employee.

So now that has been brought into line. A certain price for noncommercial banks, I think, had been dropping at 10 percent per year and now it is rising slightly. So that alone contributes about ¼ percentage point to the upward revision in the core measure for 2004. So these are very big, very quantitatively important revisions.

CHAIRMAN GREENSPAN. Are they going to revise it again next year?

MR. WILCOX. I'm absolutely certain that their hope is that any revisions will be for reasons other than error detection. They will bring on board new source data and new

information of all sorts. We're not expecting anything again that would involve revisions of this magnitude.

CHAIRMAN GREENSPAN. President Fisher.

MR. FISHER. David, we've been discussing anecdotal evidence in the last few meetings on the lack of pricing power in the corporate sector. And we've anticipated that margins would be squeezed unless there was substantial top-line or revenue expansion. I'm wondering if you're seeing any evidence that that situation has changed. Is there any evidence in the data that companies are not just meeting these increased price pressures through cost-cutting but are beginning to pass their higher costs on?

And then, Karen, my question for you is: Could you give a number for the trend-line rate of dollar depreciation, including the yuan, you anticipate?

MR. WILCOX. I don't think we are seeing any slippage or deterioration in price pressures. Maybe the most direct piece of evidence on that is just that the last couple of readings on the CPI have come in to the good side of our expectation. I think that's the best summary statistic I can cite. From the orders contacts that we have in the business community, for example, I don't think we're noticing a marked intensification of price pressures either.

It is true that in the national income accounts the markup of price over unit labor cost was revised down just a bit, but we don't lean on that very heavily in our inflation analysis. So, I'd say the fact that the market-based inflation news has been to the good side of our expectation is probably the best summary statistic that I can give you.

MS. JOHNSON. With respect to the trend, over the Greenbook forecast horizon, the dollar is now, on average, depreciating in real terms about 1½ percent, and in previous Greenbooks the comparable figure would have been about 1¼ percent. So we've deliberately

constructed it so that the 1¼ percent embedded the notion that a block of Asian currencies was pegged to the dollar. If we're going to undo that assumption, it should show through. So it's by construction, basically; this is just our attempt to signal this and let the rate of depreciation rise to 1½ percent.

I have to say that when we do Greenbook extensions that find their way into background uses in the Bluebooks and so forth, that rate of depreciation so allows the external imbalance to explode that we actually have to up it. So, any time we do anything that runs longer than the Greenbook horizon, we put in a number like minus 4, because otherwise the external sector behaves in such a dominant way that the simulations don't seem useful. But for the Greenbook horizon, that period is so short that in all honesty the real dollar could go up and not down at all. So we now have that minus 1½ percent in place as a sort of marker.

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. David, I thought your discussion of the details of the Greenbook forecast was very enlightening. I want to congratulate you for the presentation. The implications for inflation that flowed from that were clearly stated. The question I have is whether the confidence band around your forecast for inflation has changed very much. Is it as symmetric as it was?

MR. WILCOX. I can't think of any reason off the top of my head for the confidence band to have changed. We certainly perceived no asymmetry in the risks. We've gone to enormous effort this time, as always, to present to you a forecast with balanced risks. I don't see any reason why the width of our confidence band should have narrowed or widened. I suppose I'm going to fall into a common conceptual error here, but I guess I would say that the uncertainty around the oil price projection might be even greater now than average. But I hear

echoes in my brain saying, “You know, now is a particularly uncertain time,” and I never hear anybody ever saying, “Now is a particularly certain time.” [Laughter] Nevertheless, if I were going to point to something that would widen the confidence intervals, it may be the oil situation, but I don’t find that a very compelling piece of evidence.

MR. MOSKOW. Could I add just one other point to that question? The output gap is smaller, essentially shrinking to almost nothing by the end of the year, and there’s less slack in the economy. Does that factor into your answer to Tony’s question?

MR. WILCOX. No, it doesn’t because in our inflation models, the output gap enters linearly. So it has the same effect at the margin, whether it’s 0.7, as it was at the end of the projection last time around, or 0.1 as it is this time. We are very uncertain about what the actual magnitude of that output gap is, but the fact that our point estimate is at 0.1 percent rather than 0.7 percent doesn’t materially change our uncertainty about the inflation outlook. It would if we perceived some kind of a threshold effect—if, when output moved above potential, we saw that as igniting inflation pressures in a nonlinear way. But we’ve looked over the years and haven’t found any compelling evidence of a nonlinear effect of that kind.

CHAIRMAN GREENSPAN. Yet theory would suggest it has got to exist.

MR. WILCOX. Well, I think the best metaphor for the way we take this measure of the output gap into account is that we view it as a barometer. It’s an indicator of pressure. At any given moment in the economy there are going to be sectors and regions that have more pressure than others. So if the output gap is well constructed, what it should be showing is that as actual output gets into the neighborhood of and perhaps even exceeds potential, in general average pressures will be rising. So the average upward impetus on inflation will be increasing, but—

CHAIRMAN GREENSPAN. It's the interaction effect between industries. If a couple of them are starting to squeeze, the interaction picks up. And it becomes a geometric, not an arithmetic phenomenon, as everybody moves toward capacity.

MR. WILCOX. There used to be a view—I'm thinking back to the Brookings 1960s view—of an L-shaped supply curve.

CHAIRMAN GREENSPAN. Well, how about a J? [Laughter]

MR. WILCOX. I'll give you J. [Laughter] You know, our ability to detect these kinds of things in the aggregate data is not very good, especially against—

CHAIRMAN GREENSPAN. No, I understand that. But there's an interesting question here about policy. I think you're quite obviously correct that it's very difficult to find because it's not a point estimate; it's obviously some sort of function. But at the end of the day, there has to be a fixed absolute ceiling at some point. As you approach that, I don't think it's an L, but it's got to be something of that nature. The fact that we can't find it in the data is not—

MR. WILCOX. Just to be clear, we don't see potential as a sort of physical maximum.

CHAIRMAN GREENSPAN. It's a barometer.

MR. WILCOX. It's a measure of the sustainable rate of output which can be maintained with all other factors either contributing to inflation or deducting from inflation so that productive capacity isn't itself lending any impetus up or down to inflation. That's not to say that output can't transitorily go above potential. It's not to suggest that producers have met their physical capacity—their limit on production.

CHAIRMAN GREENSPAN. President Lacker.

MR. LACKER. Yes, I have a question and a comment. The question is whether the revision in the nonmarket core PCE price index should cause people to revise the number they carry around in their heads for the documented upward bias in the PCE.

MR. WILCOX. That's a very deep question, and I think the answer—

MR. GEITHNER. As opposed to the others. [Laughter]

MR. WILCOX. If we could engage in a little Orwellian history, I think what we would prefer to do is to go back and revise our old estimate of the bias in inflation. We might maintain our estimate. Or we might say, "Oh, there was something in the data that I didn't understand before so if I thought the upward bias was 0.9 percent, maybe I should have thought it was only 0.7 percent."

CHAIRMAN GREENSPAN. Would you explain to me what "upward bias in a nonmarket component of the PCE" means?

MR. LACKER. I was asking if this corrects any known sources of bias. If you're looking for sources of bias and document them, and this doesn't affect any of those, then it strikes me that it shouldn't change our notion of the upward bias, right?

MR. WILCOX. Having made this correction, if you thought the bias was X before, not knowing about the mistakes in the—

MR. LACKER. We should still think it's X.

MR. WILCOX. Yes, you should still think it's X.

MR. LACKER. All right. Thanks. My comment has to do with your line of questioning, Mr. Chairman. It doesn't seem to me from the models I'm aware of that reaching that wall, as you put it, has to result in an acceleration of nominal things as opposed to real things, which would accelerate. The late '90s seems to me a good example where our credibility—the way we

were expected to conduct monetary policy—allowed that link to be broken. Is that consistent with your interpretation of the '90s, Mr. Chairman?

CHAIRMAN GREENSPAN. I wish it were true. It conceivably might be true, but I'm not sure the evidence is fully consonant with that view. Let me put it this way: The concept of capacity 50 years ago for a lot of industries was an engineering concept. There was just so much steel you could get out of an open hearth steel furnace without an oxygen lance. It was an engineering concept. Today, it's like a rubber mat. In other words, you can press it. Although you have an average expected long-term capacity, you can still go well above that, but it's more and more costly to add to production. So, I think what has happened is that the notion of capacity is more like a rubber mat. As you move up to capacity, the marginal cost doesn't change. When you hit capacity, you can push it up—indeed, by quite a significant amount—but the costs rise and, hence, the effective capacity declines.

Now, what that says about the relationship between nominal and real is a wholly different matter. That is a different concept. The issue you're raising is one possible explanation of why we could still have this sort of flexibility, but it has little to do with inflation. I don't think that's the case, but it's conceivable. I'd like to believe it's the case, but—

MR. LACKER. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Yellen.

MS. YELLEN. My comment concerned the nonmarket portion of the core PCE and its revisions, and you've covered much of what I wanted to get at in your answer to the Chairman. I don't want to belabor the point, but I will spend just a minute on it.

In looking at this very large revision in the nonmarket component, I naturally ask myself whether or not this should change our interpretation of what inflation was in 2004. Is the

character of the revision one that suggests we've received additional data telling us that inflation, indeed, was higher than we thought? Or is its character more that of a methodological revision—that is, we have no new data but have processed it differently, and now we're changing the yardstick or the ruler we use to measure something?

My interpretation—and I'd like to make sure that you agree with it—is the former. I believe it's more of the character of having received new data that told us, with an unchanged measurement tool, that inflation in 2004 was higher. For the hospital insurance and medical care component, an analyst made a programming error, and that led to an underreporting of true inflation in that component in 2004. And in the noncommercial bank, or other financial sector component, an analyst built in an assumption—I think probably largely about mutual funds—that the pricing of mutual fund services would be declining over time. But when BEA looked at the data, they discovered that was a terrible assumption and that it had not occurred. So, that has the character of new data indicating that what was built into the index was wrong. Therefore, inflation in the nonmarket component, which I think is 18 percent of the overall core PCE, really was higher than we thought and there's no reason to ignore it. At least those were the major parts of the revision.

MR. WILCOX. While I agree with every aspect of what you said, where one is left at the end of the day is with a difficult question as to how to judge truth. In the case of gasoline, we can go out and conduct an independent sample of the price of gasoline at filling stations around the country, and we can assess whether the measurement methodology leads to a bias in the CPI relative to what individuals are actually experiencing in their day-to-day purchases. But the very essence of these components we're talking about is that it's vastly more difficult, maybe even impossible, to do any kind of benchmark study to know whether we have the measurement right.

I'm very confident that in the revised version of the national income accounts the measurement is better. But whether it's right or not now is impossible to say.

MS. YELLEN. I admit that there's something arbitrary about the methodology that is used. But the change we see is not due to a change in the methodology for assessing the truth. One could use a different methodology. The change is akin to new information that, given a fixed methodology, tells us that inflation was really worse in 2004 than we thought.

MR. WILCOX. That's exactly correct. Yes.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. I'd like to ask about the labor force participation rate. You show a sustained downward trend, and I think that has a lot to do with the elimination of unused resources in the labor market, because your projection is for the labor force participation rate to stay about constant. But you have the trend participation rate moving down to about 66 percent, which is more than a percentage point below where it was for about three or four years in the late '90s. Could you talk about the reasons for that projection? What is bringing down the "equilibrium"—I guess that would be the right term— participation rate in the labor market?

MR. WILCOX. I can point to two main factors. One is simply the aging of the population. The baby boom cohorts are moving into an age of lower participation rates.

MR. POOLE. This is participation for everyone over age 18?

MR. WILCOX. No.

MR. POOLE. So it includes that part of the population that is above age 65? I'm talking about the definition of the rate.

MR. WILCOX. People my age and older are moving into lower participation rate categories. That alone, on our estimates, has been taking about a tenth of a percentage point off

the trend participation rate per year since 2002. So that's the predominant factor. The other factor that we think we see is a leveling off in the participation rate of women. Whereas earlier in the postwar period the participation rate of women had been rising strongly, we believe that has ended. So those two factors are the major driving forces.

MR. POOLE. But your trend rate is down more than a percentage point from the level that was sustained in the late '90s.

MR. WILCOX. Well, we think that participation rate was above the trend. Let me set the facts first. The actual participation rate was about trendless from 1990 through 2000. We have the trend in our new model running at about 66.6 or so through that period, including through the late 1990s. We have the participation rates in the years from 1996 through 2000 running above trend.

MR. POOLE. By about ½ point, I guess.

MR. WILCOX. Correct—at its peak. Then, as the economy softened and came into the recession in 2001, the participation rate first came back to its trend. Subsequently, through the period from 2002 through 2004, it softened and went below trend. In our projection, going forward we anticipate the actual participation rate to hold about flat; and the participation rate gap in our projection is closed because we have the trend coming down to meet the actual.

MR. POOLE. Right.

MR. WILCOX. So, it's true that this decline in the trend is an important feature of our outlook for the labor market.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. For a variety of reasons, I've had some inclination to look over the intricacies of the work that you've been doing on the labor force participation rate. I find it very

interesting, and I think there are a number of ways one can look at data in this area and separate out cyclical and trend developments. Looking at the forecasts we have and the important impact of the labor force participation rate, I'm wondering what your band of uncertainty is regarding your projection on the trend rate. I, for one, would hope that what we're seeing in the early years of this century is not indicative of future female labor force participation. Maybe there is an economic reason for why that pattern of female participation is occurring, but I have yet to see one that really strikes me as reasonable. So, I'd like to know what your range of uncertainty is.

MR. WILCOX. As with all econometric estimates, we do have a range of uncertainty. On our estimates, the trend participation rate now is 66.3 percent, which is just a couple of tenths above its current level. Our reading of the article that was published in your Bank's *Review* is that Katharine Bradbury's estimates run from 66.8 at the low end and up to 68. By the way, for reference you could look at page 3 in Part 2 of the Greenbook, if you have a copy of that.

MS. MINEHAN. I don't think it's worthwhile to get into a discussion of the two approaches—granted that the statistical methods are very interesting and I've yet to really understand them all. That's my problem; it's not your problem. I'm just asking about your sense of a confidence interval or band of uncertainty.

MR. WILCOX. Our confidence interval, if we were to state it, perhaps would run up to 67. If we were really stretching, maybe we could see a trend participation rate in the neighborhood of 67. I, frankly, find that a little hard to believe, given the strength of the demographic forces that we think we see pushing down the trend participation rate by about 0.1 percent per year. Our point estimate, as I say, is 66.3. Our labor economists say, on their confidence intervals, it may be somewhere in the mid-66 area. We'd all agree that there are

uncertainties about the methodology. So, if we stepped outside the formal econometrics, we might think we could see a number as high as 67 or something like that.

MS. MINEHAN. That's the range of uncertainty.

MR. WILCOX. But that 67 would really be pushing it. That would be taking into account that there probably are considerations outside of the model and that models never quite work out as well as econometricians or empirical investigators hope. But at the end of the day we believe that the case is fairly strong for some downward tilt in the trend participation rate.

MS. MINEHAN. Thanks.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Yes, I have just a quick question. We've talked a great deal about the intricacies of measuring the various price indexes—the PCE or whatever. I want to clarify, though, that—regardless of which index one is looking at and adjusting—the trend line on inflation is up over the last 12 to 18 months. Even with these adjustments, you still have a trend line that is up, which I think is an important consideration.

MR. WILCOX. Yes. Our price projection has moved up. The best measure of that may be what has happened to the core PCE price index. Let's see, now that I'm looking at the numbers I'm about to eat my words. In 2002, on the revised figures, core PCE inflation was at 2.2 percent and we now have it at 2.0. So if one takes as the trend last year and the first half of this year, I guess I'm going to have to reverse myself and say that the core PCE price index has been about flat. It has been running in the neighborhood of 2 percent or a little above. It has been higher than we thought because of the oil price.

MR. HOENIG. It's higher than we thought, but not getting higher?

MR. WILCOX. But not getting higher, yes.

CHAIRMAN GREENSPAN. Any further questions for our colleagues? If not, would somebody like to start the general discussion? President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. There haven't been many changes in our region since the last meeting, so I'll keep my comments about our region brief.

Business conditions around the Seventh District are generally good, although we still lag the nation. Labor markets continue to improve gradually, and inflationary pressures remain moderate. Many of our contacts remarked that growth has come down from last year's pace, but they've also acknowledged that last year was unsustainably strong and that the current moderate pace is more in line with long-run trends.

Finally, Michigan is still struggling, due to its heavy reliance on the Big Three automakers. The Big Three indicated that the reaction to their latest incentives, which succeeded in pulling down inventory significantly, as David mentioned, was larger than they had expected. Nonetheless, they told us they were only raising their sales outlook for the year as a whole by 100,000 or 200,000 units. They also said that they would be fairly conservative about increasing production; this gets to the payback we talked about before.

Turning to the national outlook, the recent data confirmed that the economy is on solid footing. We expect growth to be somewhat above potential over the rest of this year. This represents a modest strengthening of our forecast since June. And with the unemployment rate at 5 percent, it is likely that the current degree of resource slack is small. The moderation in the recent monthly core inflation data is a positive development. However, the upward revisions to core PCE inflation are a serious concern. Apparently, inflationary pressures were higher than we thought when we introduced our "measured pace" language.

At our last meeting, I was concerned about the possibility of core inflation running above 2 percent sometime over the next couple of years. Now it turns out that we've already been having inflation at that pace. This, of course, includes both market and nonmarket inflation but I don't think you can discount the nonmarket inflation. As Janet said, we now have additional data. And I think the point is, in reference to Tom's question, that the forecast for core inflation has changed now. It used to be that inflation in 2006 was coming down from the rate in 2005, and now, of course, it's going up.

Looking ahead, given the policy assumption in the Greenbook, we think the inflation forecast is reasonable and that the risks to the outlook are balanced. But I am uncomfortable with the outlook. I'd like to see inflation stabilizing below 2 percent much sooner. I agreed strongly with the Chairman's arguments at the last meeting about the asymmetric policy costs surrounding the inflation forecast. And at the higher rates now built into the Greenbook, we could face an even greater risk of a disappointing increase in inflationary expectations. In that case, reestablishing price stability would require much tighter policy than markets currently expect.

I'm also concerned about the large amount of liquidity chasing financial deals. In the early stages of our accommodative policy, businesses were extremely cautious and many capital investments were deferred. Liquidity flowed into mortgages and into housing. Now corporations are flush with cash, competition among lenders is intense, money is flowing rapidly into private equity funds, and banks continue to relax lending terms. I think we may be approaching the point in the lending cycle where investors tend to overreach and make bad investments. We can help counter this by removing policy accommodation at a sufficient pace.

And given firms' buffers of cash, I don't see much risk of choking off productive investment projects if we raise rates to levels somewhat higher than markets currently expect.

So how does this all add up? Given the good prospects for growth, but with some asymmetric policy risks, I continue to think that we should raise rates until we are comfortably in the middle of the neutral range. To me, this means reaching a fed funds rate of about 4½ percent before we pause. Of course, we will continue to watch the incoming data. If either inflation or growth comes in much lower than expected, we can stop earlier—or we can do more if necessary. Finally, it's pretty safe to say that this is not the meeting for us to change our policy strategy. So I favor a 25 basis point increase today, and I'll hold off my comments on the language until later.

CHAIRMAN GREENSPAN. President Fisher.

MR. FISHER. Mr. Chairman, as reported in the Beige Book, activity in our District has picked up substantially. There's a tremendous amount of activity in all but the manufacturing sector. And there's an enormous surge in confidence, particularly in Texas, even though that may seem like a redundancy to talk about confident Texans!

I'll refer to just a couple of points very quickly as part of the broader discussion we've been having at this table. First, we've had a huge surge in housing starts. Houston now ranks second in the country year-to-date in terms of housing unit permits, and Dallas ranks third. First, by the way, is Atlanta. Moreover, permits are running at rates roughly three times what we see in New York City and roughly twice those in Miami or Orlando. But to illustrate the point that we discussed at our last meeting, in terms of price pressures, Dallas ranks 250 out of 265 MSAs [metropolitan statistical areas], which shows the geographic differential. In any event, we've had a substantial pickup in housing activity.

The second point, with regard to energy, is that Texas, Louisiana, and New Mexico account for two-thirds of the rig count in the United States. It's a rather schizophrenic sector. One might say that schizophrenia beats dining alone, because we do get both sides of these arguments. [Laughter] We have a very excited group of people—the rig operators—now running at the tightest capacity rate in terms of rig utilization since December of 1985 in the case of Texas and since 1986 in the case of Louisiana. As evidence of the kind of pressure that's occurring on the happy side, but also a testimony to globalization, we have the first case of a company—a small company that was not able to find rigs—importing a rig with workers from China to operate in a certain basin in Colorado. By the way, 70 percent of that rig content is constructed in China and 30 percent in the United States. This is the first such case that we're aware of.

On the opposite side, the depressive side, there is a constant fear of price collapse in the oil sector. One might describe it as a wild surmise, except that one of the most articulate and outspoken champions of the view that oil prices could fall dramatically happens to be Lee Raymond, the Chairman of Exxon and the Chairman of the National Petroleum Council. He likes to remind listeners, and he lectures me constantly, that in 1985 or 1986—I forget exactly when it was—we had a price collapse which took oil prices from \$28 to \$10 in two weeks. He is constantly warning his colleagues—noting that it is a minority view within the oil patch—that if we have a warm winter he expects that kind of price behavior in the oil market. And he certainly is a noteworthy proponent of that view.

On the high-tech side, I'd note a couple of points based on conversations with Texas Instruments and Dell on the issues of capacity and capital expenditures. TI, having just announced that they're going to build a huge factory—a \$3½ billion investment in the Dallas

area—says that they expect this to be one of their last full-bore production facilities for wafers. By the way, even with that large dollar investment, the factory will employ only 500 people. What they're finding now is that they can buy what they call commodity wafers—which is about 60 percent of the content they need—from Chinese producers at ever-lower prices. Dell repeats the same kind of defiance of the laws of economic behavior, as they put it, in terms of what they're able to source out of China, and they claim now to be the second largest operator of U.S. companies in China. Moreover, they report that with each passing day, as we've heard from retailers, somebody appears on their doorstep able to outbid any existing supplier at an ever-cheaper price.

As far as the retail sector is concerned, again, with my colleague's permission, I do talk to contacts from Wal-Mart occasionally—to the COO and to the President of Wal-Mart International. We hear the same kinds of reports, and there are substantial questions about Chinese accounting. And, Karen, the reason I asked the question about the assumptions regarding the Chinese yuan appreciation or the general depreciation of the dollar against the yuan—even though it's obviously very volatile—is that the CEO of Wal-Mart International said that it makes absolutely no difference that China has revalued the renminbi at this juncture. They constantly find that people that will come in and underbid existing suppliers. The supposition, Mr. Chairman, is that the Chinese (a) don't pay back principal, (b) don't pay taxes, and (c) if they do pay taxes, they pay the tax collector rather than the government. All of that, of course, gives them a substantial advantage. This has always been the case, and we assume it will be not carried forward over time. But in terms of competition, there seems to be a voracious appetite to continue to supply—a variation of the old Communist model in which they produced for production's sake and now they produce for sales' sake. Again, our private sector—our

retailers, our high-tech sector, and others, and now our energy sector—are taking advantage of that situation.

Having said all of that, I want to indicate, as did Mr. Moskow, that with this strong economic activity, even though there may be a risk that we're borrowing from the future, we, too, are concerned about inflationary pressures. So we would be in favor of further tightening to the degree that my former colleague as Deputy U.S. Trade Representative just mentioned. We'll talk about the wording of the statement later. Thank you very much.

CHAIRMAN GREENSPAN. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. Recent data, including the benchmark revisions, have altered my perception of the economic scene noticeably. We now see more underlying strength in economic activity relative to potential through the second quarter and into July. The July employment report suggests that job growth has also gained momentum, and developments in a broad range of financial markets suggest that market participants share this assessment. The Greenbook, sensibly, has raised its assumed path for the funds rate to bring growth next year back to the pace of potential.

The inflation picture is clouded up in both senses of the word. It is unclear and also a bit foreboding. The picture is a bit foreboding because the benchmark revision boosts inflation as measured by the core PCE to 1.9 percent over the last 12 months, which is at the top of my comfort zone. It's unclear, because our two main inflation gauges are now giving different readings on the performance of inflation over the last year, although both, fortunately, suggest that inflation has been relatively tame over the past several months. With a normal gap of about ½ percentage point over the core PCE, the 2.1 percent increase in the core CPI, in contrast, presents a rather benign inflation picture.

Of course, the issue for policy is not so much where inflation was in the past but, rather, where it is headed. Given the unusually small and likely transitory gap between the two measures of core inflation, we tried to break through some of the cloudiness associated with this divergence in signals by examining statistically which measure typically does most of the adjusting to bring the spread back into line. A finding that the CPI typically does most of the adjusting would be bad news. A finding that the PCE price index normally bears the brunt of the adjustment would be good news. Unfortunately, we found few statistical regularities. Both measures have taken the lead at different times, so we can't count on either one to provide a reasonable signal at the present time.

Moving from actual inflation outcomes to the pressures affecting inflation going forward, it seems likely that higher oil prices are being passed through to core inflation to some extent. So unless they rise further, the effect on core inflation should begin to dissipate next year. Unfortunately, I think I also said the same thing at our June meeting, and they did rise again.

Another risk relates to unit labor costs, which have risen notably over the past year after several years of little or no change. This partly reflects slower, although still robust, productivity growth. Insofar as the decline in productivity growth has been cyclical rather than structural, our analysis, and that of other researchers, suggests that it will have little effect on inflation. In other words, it is structural productivity growth and trend unit labor costs that mainly drive inflation. It would take a drop in structural productivity growth to boost inflation.

As discussed in the Greenbook, the recent benchmark revisions probably do warrant a modest decrease in our estimates of structural productivity growth, which does add to inflation pressures, making the outlook a bit less favorable than I originally thought. Nevertheless, it is

encouraging that, even after a downward adjustment, productivity still seems to be growing somewhat faster than the robust rates achieved in the second half of the '90s.

I'm less concerned about inflation pressures emanating from the other component of labor costs, namely, labor compensation. Although compensation per hour jumped recently, this appears to be due to one-time factors and thus should be discounted. This interpretation is supported by the smaller increase reported in this morning's release on the second quarter and from readings from the employment cost index, which excludes these items and has shown only modest increases.

Furthermore, recent increases in labor compensation could be part of the process by which labor's share of GDP is returning to more normal levels, following a period of unusually rapid growth in profits that has been pushing up capital's share. This interpretation is supported by recent econometric work by our staff suggesting that transitory deviations of the markup from its mean are typically unwound over time by movements in labor compensation, not inflation.

Indeed, our contacts are telling us that in the absence of much pricing power, increases in labor costs are hurting their bottom lines. The increased pressure on margins appears to have reinvigorated the search for productivity gains. For example, a natural gas drilling company in our District just installed chips in all of its wells that alert a central control when a well is down. With this technology the firm has been able to shed workers who check the wells manually, and it has decreased the down time of wells in the network.

So for all of these reasons, I'm inclined to think that inflationary concerns about unit labor costs should be focused more on possible changes in structural productivity growth than long-term labor compensation.

Another source of inflationary pressure relates to slack in the labor market. In my view, a whisker of slack probably still remains, but on balance there is probably less than we saw in June. Of course, the unemployment rate remained at 5 percent in July, but other measures, such as the employment-population ratio, a survey of job market perceptions, and industrial capacity utilization now signal a bit less slack.

So, overall, the economy is noticeably stronger than seemed likely in June. Some of the slack that remained at that time has been eliminated, and the trajectory for inflation has shifted up a bit. The market's expectations concerning the degree of Fed tightening have increased, as have longer-term yields. I consider it obvious that we should continue on the path of raising the funds rate, and I'm comfortable with the wording in Alternative B.

CHAIRMAN GREENSPAN. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Incoming economic data since our last meeting have been consistent with a reasonably paced recovery and well-contained inflation. Payroll employment has been solid. It has even accelerated a bit lately, indicating steady improvement in overall labor market conditions. The ISM [Institute for Supply Management], industrial production, retail sales, and durable goods orders all came in stronger than anticipated, and the GDP report exceeded what was expected in the June Greenbook.

The recent strength in business investment bodes well, I think, for the ability of that sector to take the baton from the housing market should it wane. For now, though, households seem confident enough in future income prospects to continue to expand spending, particularly on durable goods and housing. Thus, the outlook for the remainder of the year is brighter now, and the Greenbook has marked up second-half real GDP by $\frac{1}{4}$ point.

Our information on the Fifth District's economy is broadly consistent with the national outlook. Retail sales picked up markedly in July, as shopper traffic and big-ticket indicators both rose significantly. Employment growth in the sector seemed to moderate last month, however, unlike the national figure. In the service sector outside of retail, revenue growth picked up and employment continued to expand at a steady pace.

Manufacturing shipments rose modestly in July, but new orders declined. Excluding the ailing textile industry, things look much better but still registered a bit of a slowdown in July. Employment in manufacturing continues to decline. Our surveys indicate that price pressures remain well contained in our District in both the manufacturing and service sectors. And the housing market in our District remains quite robust.

In response to the stronger real outlook, the yield curve has shifted up significantly. The 10-year Treasury yield has risen over 40 basis points since just before the June meeting, and the 5-year yield rose 47 basis points as of a couple of days ago. Market participants are now expecting substantially more tightening this year and next year—an assessment with which the Greenbook concurs. The federal funds rate is now expected to reach 4¼ percent by mid-2006, an upward revision of about 50 basis points since our last meeting.

In comparison, inflation expectations have been remarkably stable. Inflation compensation, as measured from the TIPS [Treasury inflation-protected securities] curve, has increased only 5 basis points at the 10-year horizon since the June meeting and has actually fallen at the 5-year horizon—and this despite the fact that oil prices have risen substantially on net.

It's quite striking that the stronger real outlook over the intermeeting period has led to higher expected real interest rates and little change in expected inflation. Stable inflation

expectations are obviously a good thing, although they are stabilized right now at the upper end of my comfort zone and I'd be happier if they were ½ point lower. What's really impressive, though, is the public's belief that we will move the funds rate by whatever amount necessary to prevent stronger real prospects from showing through to future inflation. Our past behavior and communications evidently have given people a fair amount of confidence that we will allow short-term real rates to fluctuate as needed in response to changing fundamentals.

This, Mr. Chairman, was the idea behind the question I asked you earlier. The issue is whether the economy might be able to withstand fluctuations in capacity utilization or the output gap, or however we measure it, without necessarily having these real relative price changes that are naturally going to occur in that circumstance pass through to overall inflation. This implies, however, a fairly flexible outlook for policy rates, even if market measures of expected inflation do not move around very much. I think one of the most important challenges we are going to face over the next year or so will be to preserve and enhance this confidence the public has in the responsiveness of policy to evolving economic fundamentals. Thank you.

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. Thank you, Mr. Chairman. As expected, the economic softening we saw in the Third District in late spring was temporary, and economic conditions in the region have strengthened since our last meeting. Retail sales in the District, which had fallen in May, improved in June and early July. We saw gains in most categories, especially seasonal items, apparel, and home furnishings. Like elsewhere in the nation, strong auto sales led the way. Our dealers report that their inventories are now at desired levels, but many are concerned that sales will ease later in the year unless incentives remain in force.

While retail sales have regained some strength over the past month, high gasoline prices are beginning to impact consumer behavior. Our dealers report a shift away from SUVs—that's a plus as far as I'm concerned [laughter]—to vehicles with higher fuel economy. We've also had reports that shoppers were visiting stores less frequently, consolidating shopping to economize on gasoline expenditures.

Manufacturing activity in the District also has improved since June, although it remains more subdued than last year. The index of general activity in our manufacturing survey rose to 9.6 in July, up from minus 2.2 in June. That's quite a large swing in the index, and it is true that the volatility of the index has increased this year. But a staff analysis indicates that the level of volatility remains low by historical standards and that the index continues to be a good indicator of changes in the manufacturing component of the industrial production index.

The more forward-looking indicators in the survey, including the indexes on new orders and shipments, also showed modest improvement in July. Activity in other sectors of the District's economy continued to expand in line with recent trends. Payroll employment growth in the region accelerated to 1.5 percent in the second quarter, somewhat weaker than the nation's pace of 1.8 percent. Regional unemployment continues to trend down in most of the District's labor markets. The three-state unemployment rate fell from 4.8 percent in the first quarter to 4.5 percent in the second quarter. Only six of the District's sixteen labor markets had unemployment rates above 5 percent in June.

The residential housing sector continues to show strength. Construction and home sales were up on a year-over-year basis in the three-state region. House price appreciation continues and is especially strong in New Jersey. The downward trend in nonresidential construction appears to have bottomed out, and we saw a strong increase in office construction activity in the

first quarter, especially in center city Philadelphia. The demand for commercial space continues to expand at a slow but steady pace in Philadelphia, but vacancy rates remain at nearly 17 percent.

News on the regional inflation front has improved somewhat. Consumer price inflation in the region is still running at a stronger pace than in the nation, due mainly to stronger increases in owner equivalent rents. But it's down from the pace we saw earlier in the year. Increases in wages and benefits in the Northeast have also moderated, although some of our business contacts report that they are planning higher salary increases for next year. A manufacturing survey indicates there has also been a moderation in industrial price pressure this year. Although the prices paid and prices received indexes remain elevated, much of the significant increase in the indexes seen last year has been worked off.

In summary, after a temporary lull in activity this spring, economic conditions in the Third District have strengthened and the outlook is positive. Regional business contacts remain upbeat and expect the region's economy to continue to expand in line with the recent trend.

Incoming data suggest that the national economy has also regained momentum since our last meeting. The data reports received over the intermeeting period on most sectors have come in better than expected. At our previous meeting, I argued that it was premature to conclude that the softer data we were getting at the time pointed to the beginning of a persistent downturn. Rather, I interpreted it as part of the fits and starts we usually see as the economy approaches equilibrium. Similarly, I believe it is now premature to conclude that the faster growth in final demand we saw in the second quarter will necessarily persist.

However, I think we need to be particularly watchful at this point to ensure that we don't get behind the curve with monetary policy. That risk has increased, in my view, with the risk

that aggregate demand may be growing above potential at a time when little slack remains in product and labor markets. So we must remain vigilant.

It is true that the most recent monthly measures of inflation have moderated, and the revised data on core PCE suggest that it has not accelerated this year. Still, the levels of inflation are significantly higher than previously measured, and the benchmark revisions in the GDP report suggest that less capital deepening has occurred. The latter implies somewhat weaker structural productivity growth going forward and more inflation pressures. In our current economic situation, therefore, it is my view that we must continue on our path of removing monetary policy accommodation.

As for the announcement we use to explain our action, we should point out the strengthening that has occurred in economic conditions since our last meeting and the fact that the inflation pressures are indeed elevated. Appropriately wording the rationale part of the statement will ensure that we have substantive policy flexibility at future meetings, even if we decide to make no change in the assessment-of-risk paragraph today. In fact, to me a better time to change these paragraphs is when we think a significant change in policy action is called for. I don't think that time is today, but it may be getting closer. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. The District economy continues to track the national economy quite closely, as it has for a long time. And as I commented at the last meeting, what is striking about the District economy right now is the breadth of the economic expansion. Virtually all sectors are either strong or improving, and I won't go through a review item by item. I will say that with the growth in economic activity in the District and with

improving employment conditions, wage increases still remain quite modest, as best I can judge. And inflationary pressures haven't changed, as best I can assess the situation.

As far as the national economy is concerned, we're now almost four years into the current economic expansion and, overall, things look quite good to me. That in a way is remarkable in and of itself, as I think of the conversations we've had around this table over the last four years and the variety of concerns and issues that were raised. To be sure, policy has played a role in supporting this economic performance but, as I've commented before, I think once again we are observing the fundamental soundness, resilience, and flexibility of the economy.

The situation is starting to resemble in broad terms, in my mind at least, the long expansions of the '80s and '90s. In fact, without stretching too far, I think one could perhaps make the case that the situation is even a little better than a few years into those expansions. After all, today we have low interest rates, low inflation rates, well-anchored inflationary expectations, for the most part a fairly well-balanced domestic economy, and what I might call a promising international economy. I call it promising not because I'm thinking about Europe or Japan, but because I'm thinking about China and India and some of their smaller brethren.

There are some issues, to be sure. One is oil prices, which have already been mentioned today. The federal budget situation is another one, although I think that's more a secular than a cyclical problem. And then there are housing prices. All I would say there is that even if there is a bubble, and even if it bursts, the quantitative significance of that remains quite unclear, as far as I'm concerned.

I do think we need to pay considerable attention, as we have been, to the inflation situation, but my sense of the situation is that there is no significant deterioration under way or imminent at the moment. And I'm inclined to stick to my random walk methodology for

forecasting inflation. It has worked remarkably well for a good number of years now.

[Laughter] Having said that, I do think it's appropriate to continue with the policy path we've been on. That seems, given the way the economy has evolved, fully appropriate to me.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Thank you, Mr. Chairman. Consistent with incoming data on the national economy, business conditions in our part of the Southeast have remained positive since our last meeting. In fact, I found it more difficult than usual to answer the questions: "What has changed?" and "What are we seeing and hearing in the region that might help inform national trends in our policy discussion?"

So, uncharacteristically, I will highlight just one regional issue—one I've talked about a great deal and one which I still think is especially important—and that is the extraordinary pace of home building and sales in some of our markets in the Southeast. It may be wishful thinking on my part, but one gets the sense that things may—and I emphasize may—have begun to show some signs of cooling. Although home building remained at high levels over the most recent period, reports from builders in our area were a bit more mixed, and some modest deceleration was noted in a few Florida markets. Most interesting, our bank examiners are now reporting that some of the large regional banks are beginning to exercise a new caution in their real estate lending, and some have gone so far as to actually stop development and construction lending in certain areas of Florida. I find this appropriate and encouraging. Of course, the fact that permanent mortgage rates remain relatively low, even with the recent uptick, is probably still the greatest stimulus to the extraordinary and prolonged housing boom. But I hope my sense of some restraint now being exhibited is correct and will bring us to a better balance.

Turning to the national economy, I'll also focus on just a couple of areas and their policy implications, and I think all of those have already been referenced in the question period or by others. The first is that the growth in output has, if anything, been somewhat stronger recently than I expected, even though the NIPA revisions tell us that the economy was on a somewhat lower growth path than we had thought. Others may not share my view, but I think that I, and probably we, have more often than not tended to underestimate and underforecast output growth. We may be acknowledging that again based on the fact that most forecasts, including the Greenbook, have been revised up for the remainder of the year. I believe it was President Stern, and I think he just confirmed this, who reminded us once—and maybe more than once earlier in the expansion when we were getting uneasy—to have faith, and he seems to have been right.

I'm also perhaps more sensitive than some to what we now know from the data revisions that show us the higher levels of inflation in the recent quarters. I recognize that the upward revisions on the core PCE series were in the imputed prices. Nonetheless, the level of measured inflation has gotten closer to the upper bounds of my comfort level, as well that of others, and I think we should be more sensitive to forces that could, despite the most recent monthly data that have been encouraging, exert upward pressure on prices in the period ahead.

Although I did not go back and check, I would guess that the adjustment in the estimated output gap reflected in today's Greenbook was one of the largest between-meeting adjustments in quite some time. Although I don't find the output gap framework especially helpful, the rapid closure in that measure suggests to me that upward inflation pressures could be more imminent.

Of course, the Greenbook's "more room to grow" alternative scenario could give one comfort, but I do not find that possibility compelling, because such an outcome hinges critically on the existence of more slack in labor markets, presumably due in part to the current low

participation rate. I'm not convinced that is a reasonable view. I'm concerned for two reasons. First, it is not clear that the failure of labor force participation rates to rebound following the recession means that slack in the economy is greater than is reflected currently in the unemployment rate. Our Atlanta staff's recent research indicates—when one controls for changes in worker characteristics, changes in individual behavior and preferences, and for differences in the economic environment—that labor force participation rates are not likely to return anytime soon to the peak level seen in 2000.

Second, looking at the upcoming changes in labor market demographics that will hit the economy as soon as next year, we will have to change substantially how we think about labor markets and job creation in our economy. If I read the data correctly, projections by the BLS [Bureau of Labor Statistics] and Social Security Administration show that nearly 400,000 more workers will retire in 2006 than will enter the labor market. That trend will accelerate year by year, as more and more baby boomers reach retirement age. It is unlikely to be completely offset by increases we might see in older worker labor force participation.

The cumulative deficit in workers could reach nearly two million in 2009 and four million in 2011. I think we all know our economy will find ways to deal with these significant changes. But given this forward-looking perspective, I am not terribly worried about slack in the labor market. Further, not far down the road I think we will find ourselves concerned about where the workers will come from, especially if the economy continues to create jobs—even at the current pace. Not only do we have to revamp some aspects of how we think about the economy, but we also must be mindful of the pressures that will bring to do things differently. And those trends will surely call for adjustments in some of our models.

When it comes to the policy discussion, I think we should be sure that we're comfortable, after taking account of the very latest information on growth, productivity, and inflation that we've gotten over the last couple of weeks, with the phrase in the alternative B draft statement that characterizes labor market conditions as continuing to improve only "gradually" and the phrase that says "core inflation has been relatively low." It seems to me that we should not do or say anything today that could counter market expectations that we now have a somewhat greater upside risk to inflation and that we still have unnecessary policy accommodation to remove. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. In assessing all of the information about the District that our Bank staff had gathered for this Open Market Committee meeting, and in my own interactions with contacts around the region, a few words stand out because they were repeated so often. And they are different words than would come to mind from many of the previous discussions. The words are "lackluster," "underwhelming," and even "blah."

New England's growth has been lagging that of the nation through the entire 2001-2005 period, largely because of the impact of the technology downturn in Massachusetts. For most of 2005, however, it has seemed that the region might be gaining a bit—with employment growing at a pace only slightly behind that of the nation, signs of life in manufacturing, and strong residential real estate markets.

We noticed a lull, as almost everybody else did, in the early spring. We thought that lull would dissipate, but it seems that the forward momentum that existed earlier has faltered a bit. It could be the recent hot weather and its impact on retail sales. It could be the impact of high gas prices on areas that depend on travel and tourism and on consumer pocketbooks in general. It

could be the continuing sense of business caution about hiring and prospective demand. And it could be the effect of the proposed base closings, especially in Maine. But whatever it is, economic activity seems to have flattened out, and one can see this in the consumer confidence and business confidence data.

Indeed, consumer confidence in New England fell to 79 in July, with readings on current sentiment about normal—a little bit lower, but still in the normal range. But expectations about future activity were down to their lowest reading since 2001. Now, it's only a month's data, and it's difficult to get excited about one month's data on consumer confidence, but I think it does tend to pick up the mood in the region.

That's not to say that the region's economic health is not moving in a positive direction. Employment is growing; it's just growing slowly. Unemployment is down, but that's largely because the labor force is down. Moreover, manufacturers and related service companies do report growth. Demand is just not as strong as they once expected, and they've been working hard to contain costs and increase market share through acquisitions to maintain revenue growth.

Indeed, even the once-hot residential real estate market seems to have moderated a bit. Region-wide inventories of homes for sale have risen, and Freddie Mac home price indexes for the region indicate price appreciation about at the national level, except in Rhode Island where the residential real estate boom continues. Sales of existing homes decreased in the first quarter of 2005 from the previous quarter and levels are below those seen in 2004.

Perhaps the lull in economic activity that ushered in the second quarter lingers on in the minds of New England businesses, and maybe the stronger trends that are evident now nationally will be reflected in data and anecdotes later this year. But there is a sense that this period of

growth is not so much a rising tide that's lifting all boats but a continual struggle to survive by the businesses within the region.

People keep asking where the next new thing is that will fill the downtown office space and get the region really humming again. There's no good answer to that question except that the region's history is replete with cycles of downturn and rebirth and reinvention. Indeed, looking at the glass as half full, one benefit of a period of slower but positive growth is that a lot of attention is placed on productivity enhancements in the private sector and on creating more incentives for business growth in the public sector.

Turning to the nation, our forecast for the rest of '05 and '06 is quite similar to that of the Greenbook, using the same monetary policy and government spending assumptions. We could argue a bit about the Greenbook's lowered rate of potential growth, and we end up with slightly less inflation and slightly more unemployment, given our sense that the output gap is slightly wider and will not be fully closed by the end of 2006. But a lot of this is splitting hairs. Recent economic data, the seemingly stronger health of the labor markets, and the expected flattening out of oil prices are all good news. The economy is doing well, and inflation seems pretty much in check. And both the Greenbook and we in Boston see that picture continuing into 2006.

A key question, of course, in such a halcyon environment, is how one sees the risks to that environment. Concerns abound about upside inflation risks. But in my view, anyway, the risks seemed fairly balanced. As the alternative scenarios point out, the Greenbook might be wrong about the amount of slack in the economy, and the projections of potential might have been shaded lower than is actually the case—that is, should we ever really be able to perceive what the economy's actual potential is.

Indeed, one can read a variety of labor market indicators—not just labor force participation, but also long unemployment duration, a low job-finding rate, a low job-separation rate, moderate ECI [Employment Cost Index] wage growth, and overall a continuing subdued pace of employment growth relative to GDP—as suggesting greater levels of labor market slack. Productivity as well could be stronger rather than weaker, as reflected in conversations with every business contact I have; they all continue to emphasize their unflinching focus on cost control and innovation. And profit margins remain quite high by historical standards. We could well have more room to grow without igniting inflationary pressures and over time need less, rather than more, policy constraint.

But the fact remains that we have not yet arrived at a place where most would say policy is neutral, let alone a constraint on activity. And cost pressures do reflect some upside risk to inflation. Recent data on banks' consumer, industrial, and construction lending could be a harbinger of more rather than less strength. Spending on equipment and software could surprise, given anecdotes from the tech sector. So, growth above potential is possible, and that could nudge resource usage upward. Even now, various measures of wage pressures are sending contrary signals. The better reading may be the ECI data, but the upward trend in unit labor costs should not be ignored. Energy costs could well be a problem, though they are as likely to take a bite out of growth as they are to feed an inflation spiral.

The projected current account imbalance of 7 percent of GDP is an even larger concern in my view, as the risk of a significant and perhaps sudden adjustment looms larger. If the adjustment takes the form of a large depreciation in the dollar and more pass-through to consumer prices occurs, the consequences for inflation could be serious.

And I remain concerned that abnormally low interest rates produce greater risk-taking that could come home to roost in an unpredictable way. I meet with a group of investment managers prior to the Federal Open Market Committee meetings, mostly to understand better how those individuals are reading markets. One quote from this week's meeting: "The biggest risk markets face right now is their belief that there is no risk." With equity volatilities at a very low level and bond risk spreads very narrow, market participants seem to believe things are rosy as far as the eye can see, and they seem to be reaching out the risk spectrum for return.

And it would seem that consumers continue to reflect the "don't worry, be happy" perspective in their spending and saving habits. We know from experience that such confidence can be a harbinger of financial instability to come. Thus, I continue to believe that while the risks to our forecast may be balanced, it would be more costly if we were to err on the side of more rather than less accommodation. It seems clear to me that the move to a less accommodative posture should continue. And if current trends persist, that process possibly should accelerate.

It also seems clear to me that the move today that the markets expect is the right move to be taking. And I think we should begin to give some thought to how we ought to start the process of changing our statement. Maybe we don't need to change it today, but we should set in process some movement toward thinking about how that statement should change. Continuing to reassure markets with the "measured pace" language may be providing too much in the way of certainty. Arguably, markets don't need this anymore and would benefit from a more realistic assessment of uncertainty. Some would argue, I know, that the ideal time to change is either when we see a need to pause or to accelerate. It's hard to know when that will be, and I worry that our continued use of this reassuring language is presenting its own problems.

I think it's very difficult to react three or four days before a meeting to alternative language and to come up with something that's satisfactory and moving in the direction of change. If we are going to change our language, I would hope we have a chance, prior to the week before the meeting, to contribute to the underlying thinking that goes into that. And I would argue that we ought to begin that process sooner rather than later.

CHAIRMAN GREENSPAN. May I suggest that if you have ideas or notions about how to change the statement, write a memorandum to the Committee well before the meeting, and the Secretariat will circulate it.

MS. MINEHAN. Okay.

CHAIRMAN GREENSPAN. There's no reason why you have to wait until the last few days if you have some ideas to suggest.

MS. MINEHAN. I think that would be a helpful thing to do. I, by no means, think I have the perfect answer. Probably none of us does.

CHAIRMAN GREENSPAN. You may galvanize the discussion on the relevant issues. Clearly, there is a limited life expectancy for the particular statement we're using now. My own judgment is that we may luck out in the sense that the markets will perceive changes that are going on in the economy and will move the forward federal funds rate in a manner that will essentially make our transition to a different status seamless. But we can't assume that. We have to be aware of the fact that we may have to make a very specific judgment.

Coffee is available. Why don't we break and come back in a reasonable time?

[Coffee break]

CHAIRMAN GREENSPAN. President Pinalto.

MS. PIANALTO. Thank you, Mr. Chairman. As I talk to my business contacts in the Fourth District, I'm struck by the lack of any specific concerns about the near-term economic outlook. The business community appears to be optimistic about the remainder of this year—they see diminishing inflation concerns and a brightening growth outlook.

The price statistics reported during the intermeeting period were better than I expected them to be. I hear from businesspeople I talk with that steel and raw material prices remained soft; moreover, the Big Three auto producers have reduced prices to sell more vehicles. These price cuts might take some pressures off of inflation as well. Based on the comments of my business contacts and my reading of the details of the price statistics, I don't see that inflationary pressures are intensifying further.

Like President Stern, I don't believe that the near-term inflation outlook has changed as much as the inflation revisions between the June and August Greenbook might imply. The inflation environment that I just described seems to be more in line with the baseline forecast in the June Greenbook than that in the August Greenbook. However, for reasons that David has already explained, the staff believes that there is somewhat more inflation pressure in the economy today than they saw a month ago. Consequently, they think that the policy path now needs to follow a steeper trajectory than the one assumed last month in order to nudge inflation back down gradually over time.

Now, I have to confess that I'd rather be making policy based on the world depicted in the June Greenbook than the world in the August Greenbook. And I don't want to come across as complacent about inflation. As I stated at our last meeting, the inflation rate is already running at the high end of my comfort zone. I also find myself concerned that the heavily advertised unwinding of energy shocks has not arrived. And as pointed out in the Greenbook,

the inflation outlook appears to be requiring more policy restraint. The fed funds path in the August Greenbook might prove to be too steep if inflation pressures unwind faster than the baseline projection contemplates. But it also might prove to be too flat if those pressures don't unwind at all.

I don't relish the prospect of having to add an additional 50 basis points to the funds rate path projected in the June Greenbook and not get much of a reduction in the inflation rate as a result of that. Since the funds rate paths in the June and August Greenbooks don't part company until the November meeting, I'm hopeful that we'll have a better read on the inflation situation by then. For today I'm comfortable with the path that we're on, and I don't see a need to diverge from that path today. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, let me start with some thoughts on the national economy. I do expect growth in real GDP to average about $3\frac{3}{4}$ percent this year and $3\frac{1}{2}$ percent next year. While this is somewhat slower than last year, it remains above trend. And the monetary policy and financial conditions currently in place I think are poised to support continued above-trend growth. With growth above trend, the output gap and labor market slack will further diminish. In fact, the economy appears to be at or near full employment now, which is all the more reason to have the federal funds rate above its current level.

I'd like to turn for a bit to developments in our region, because the evidence from the Tenth District is consistent with this strong outlook. For example, economic growth has strengthened rather noticeably since our last meeting. Employment continued to expand, and in the intermeeting period businesses announced substantially more new hires than layoffs in our region. Consumer spending also increased strongly, as retailers posted further gains, auto sales

rebounded, and tourist activity showed no effect that we could notice from higher gasoline prices.

In addition, energy held steady in terms of high levels of demand. Drilling has slowed in the mature oil and gas fields of Oklahoma but has continued to grow strongly in newer fields in the Rocky Mountain region. Drilling in those areas continued to be constrained by a shortage of equipment and labor. As a result—and I'll repeat what Richard said—one Denver-based energy company has ordered two Chinese rigs and rig crews for delivery this fall as well as several additional rigs for the coming couple of years.

While manufacturing activity expanded at a slower pace than in the spring, most firms are optimistic about future sales and plan more hiring and investment to meet the increased demand. A wide range of District businesses also reported sharply improved earnings due to strong revenue growth systematically in our region. The only negative news on this level was that commercial real estate markets continued to show only modest improvement and that inventories of unsold homes were up noticeably in some of our cities.

I think it is worth noting that a sizable area of extreme drought has developed throughout the central Corn Belt states. The drought affects much of Missouri and Illinois and parts of Wisconsin and Indiana. Markets currently expect the nation's corn crop to drop 10 percent and the soybean crop to drop 4 percent. As a result, corn and soybean prices have both risen about 13 percent since their planting. The USDA crop report that will come out later this week, on August 12th, could trigger a further rally in prices if drought damage is greater than the market currently expects.

Turning to inflation, I think it is worth noting that core PCE inflation, as we discussed quite extensively earlier, is now averaging about 2¼ percent this year and is expected to remain

at that pace next year. While we continue to talk about this as being moderate, I think it is important to recognize that it represents a continued upward adjustment of the inflation outlook and is at the higher end of what most of us have indicated we are comfortable with. I also remain concerned about the upward pressure on inflation. First, there is an upside risk from higher energy prices and dollar depreciation. In addition, the real fed funds rate, using the core PCE inflation, is only 1.2 percent. These factors, I think, pose an upside risk to inflation, especially when combined with growth that remains above trend and an output gap that is small and approaching zero.

I believe we are now at a point where the upside risk to the economy is greater than the downside risk. And while we appear committed to moving only 25 basis points today, and I think the market would be surprised if we did otherwise, we ought to at least seriously consider eliminating any reference to “measured pace” in our statement. To me it was noticeable in listening to David today that, as we talk about the economy, potential is less than we expected, demand is greater than expected, inflation is greater than we anticipated, and monetary policy is probably 100 basis points below what most people think it should be. In my view, it’s time to think about changing our statement. Thank you.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Thank you, Mr. Chairman. My contacts led off almost universally with comments such as: “Things look great;” “Everything is steady-as-she-goes;” and “All business areas are strong.” And I’d just like to fill in a few observations here.

My Wal-Mart contact—and as I think you know, Wal-Mart has been very concerned about the drain on purchasing power because of gasoline prices—said that they now believe that last year the company had underordered goods at the upper price point levels. That is, they had a

product mix that was too skewed toward the low end, and the part of the income distribution that buys the low end merchandise is still struggling with gasoline prices. So, to some extent, their overall sales performance last year was simply a consequence of the mix of goods that they had on their shelves. They have changed that mix of goods. He used as an example the fact that 22 percent of the TVs they're selling now are high definition digital TVs. That's a rather big percentage for a company like Wal-Mart.

An interesting comment from my UPS contact was that they are now struggling to obtain enough aircraft, in good part because of their expansion in China. That expansion is not just in the import/export business—they're entering the internal Chinese market. He said that they have no aircraft available either for purchase or lease until 2008. UPS and FedEx both have filled out their fleets to a very considerable extent by taking aging passenger aircraft and converting them. But the converters are all working at capacity. So, UPS will keep in service aircraft that are 30 to 40 years old. Obviously, those planes are much more expensive to operate, and UPS would like to replace them with new aircraft but will make do with these older ones. Both UPS and FedEx said that they're expecting a very good holiday season, but they anticipate having plenty of capacity.

A contact with a major software company said that they're a little skittish—"very cautious" was the term he used—about the large enterprise business but that other sectors of their business are doing quite well.

It seems to me clear that the economy has a very good head of steam. I would argue that monetary policy is not highly expansionary at this point. Rates have gone up a lot, and the market anticipates that rates will continue to go up. I'm one of the few people, I guess, who look at money numbers anymore, but for what it's worth—and I think it's still worth something—

[laughter] MZM is up by slightly more than 1 percent in the last year and has been about flat in the last six months. M2 is up a bit less than 4 percent. That's not consistent with highly expansionary monetary policy.

I would say, however, that there is a disconnect arising between the anecdotal reports and the econometric estimates and analysis on the state of the labor market. When I talk to contacts in my District, they say over and over again that they have no problem with labor availability and that there is no wage pressure, except in isolated cases. For example, my UPS friend said that they are having ongoing negotiations with the Teamsters and are seeing some job actions. So there may be some issue there. But except for a few scattered examples—such as truck drivers, as I've mentioned before—my contacts say that they just don't see any problem with labor availability. And that's not just at the low end, but at all skill levels, though there may still be some problems hiring accountants. But even that's not something that they bring up voluntarily when I talk with them. Again, they see no significant wage pressures. So I think there's a disconnect here between the anecdotal information and the econometric information. I don't know what to do about it, but I'd make note of it. [Laughter] Thank you.

CHAIRMAN GREENSPAN. Vice Chair.

MR. GEITHNER. Thank you, Mr. Chairman. Like everyone else, we think growth has strengthened since our last meeting. We're going into the second half with more forward momentum, and this has been accompanied by a broad-based improvement in confidence about the outlook. We expect a stronger second half of '05 than we did at the last meeting. But our forecast for next year remains essentially unchanged, with real GDP growth still a bit above potential—we think around 3½ percent—and the core PCE deflator at around 2 percent. On the assumption that we move the fed funds rate up on the higher path now reflected in the market,

the risks around this forecast seem broadly balanced to us, with perhaps a slightly greater probability of outcomes on the higher side.

As this implies, we're very comfortable with the basic Greenbook view, the story behind that view, and the evolution in the estimated output gap the Greenbook expects. I guess the one qualification I'd mention is that we don't see a strong case yet for as significant a downward revision in our estimate of potential growth or actual growth in '06.

The fundamentals supporting consumption and investment growth still seem intact. Underlying productivity growth still seems fairly good. Real yields appear to have increased materially, and equity prices, credit spreads, and risk premia generally suggest a pretty favorable view of this expansion and its durability. Our various surveys of sentiment, formal and less formal, support this more positive view of the national outlook.

We think the underlying inflation rate is following a slightly higher trajectory than we thought at the last meeting, and we think a lot of the forces at work in the economy that we have discussed today will continue to put some upward pressure on the inflation rate going forward. But we don't expect a significant acceleration in inflation above this 2 percent band, and that view, of course, is consistent with the moderation in inflation expectations we've seen since the start of the year. However, even this relatively modest path leaves us some margin above the 1½ percent pace for the core PCE that we believe should be our objective over time. And, of course, even this forecast of 2 percent could prove to be too benign.

All of this suggests that we should try to design our monetary policy signal to achieve three objectives. These will be familiar objectives. First, we should reinforce the sense that the fed funds rate needs to move higher for us to achieve our price stability objective. Second, we need to emphasize that the extent and pace of further moves will depend on how the outlook

evolves. We want to ensure that expectations of policy continue to be responsive to changes in the forecast, and we want to make sure that we have the flexibility to alter the trajectory as appropriate. It's important in this regard that we not give the market more certainty about the future path of the fed funds rate than we can reasonably expect to have ourselves. I think we also want to avoid conveying the sense that our task is simply to get to neutral, that we're confident in our estimates of what neutral is, and that we're unlikely to need to move beyond that point. Even if the data continue to support this very favorable forecast we all seem to share, we may find it increasingly difficult to decide how far we'll need to move. And, finally, given the move up since June in the market's expectation of the fed funds rate path, I think we should try to leave the expected future path of the fed funds rate largely unchanged today—or perhaps a bit firmer. But I don't see any reason now to try to induce, or to take the risk of inducing, a major shift in current expectations. Thank you.

CHAIRMAN GREENSPAN. Governor Olson.

MR. OLSON. Thank you, Mr. Chairman. August of the off-election year is a time when we can take stock of how the Congress has responded to certain issues. As we began this year hopeful that Congress would address some issues that had important fiscal policy implications, I think now is an appropriate time to review to see what impact Congress's actions will have and the implications for our deliberations.

That sense of timing was heightened in recent weeks when we got a mix of very positive and very negative news. The positive news was the 14 percent increase in receipts that the federal government has experienced thus far this year combined with the increase in payments of slightly under 7 percent. That has had the net effect of reducing the expected 2005 deficit by \$100 billion. Those trends are expected to continue going forward and the deficit projections for

subsequent years have also been reduced. That sequence and the provisions of it were very well documented in the Greenbook and particularly in Part 2 of the Greenbook.

On the other hand, just before Congress left town they passed a transportation bill that was loaded with pork, and it also contained numerous gimmicks—there's no other way to say it—that allowed them to ignore their own budgetary guidelines. And that passed with only eight dissenting votes in the House, which was very discouraging to anybody who is expecting to see some fiscal austerity.

Unlike most of you, I've spent most of my public life involved with fiscal issues as opposed to monetary issues. So it's somewhat disappointing to me that my arrival on the Board coincided with the departure of fiscal discipline at the Congress. [Laughter]

As the year started, there were a number of issues on which there seemed to be a sense of resolve that they would be addressed. In particular, Social Security was high on the agenda for this Administration. There was a recognition that Medicare and Medicaid issues were of growing concern and certainly more problematic. There was a desire to achieve some fundamental changes in income tax policy, and there were some other unresolved issues relating to either taxes or funding, particularly pension reform. The President began by announcing that he was going to—I believe he said “spend” but I think he meant “apply”—some of his political capital to the Social Security issue. Initially there was a very strong push on that but as of now—at the August recess—there seems little likelihood of action this year or perhaps even by this Congress. The hope is, if there's anything with respect to Social Security, that the Chairman of the Ways and Means Committee could package it in some way with other policy issues that have some momentum. So they might be able to move it as a package, but separately and independently it seems unlikely that the Social Security changes will go anywhere.

With respect to tax policy, the President did appoint an advisory committee on tax reform that has been meeting. I know our Chairman spoke to that group, as have others, and that committee is expecting to produce a report by September 30. Even though the report deadline seems to be in place still, the substance of what they are going to produce is not yet fully in place. However, the public statements by several of the members have indicated some of the issues that will be included. Three in particular will be fairly thoroughly vetted. One would involve a revision of the existing income tax code, highlighting the necessity of dealing in particular with the alternative minimum tax. Currently the alternative minimum tax hits about 4 percent of taxpayers; within five years, it will be up to 20 percent of taxpayers. The cost of a repeal of the alternative minimum tax could be anywhere from \$600 billion to \$1.2 trillion over the next decade. So for each year that addressing it gets postponed, the cost gets much higher. That certainly will be considered. A value-added tax also will be given some consideration, as will some sort of a consumption tax.

What will not be produced is a report that is in the form of legislation. I'm told by some that the report will be neither a legislative proposal nor a textbook. It will be a report that discusses tax options that hopefully will keep the burden relatively neutral with respect to where it is at this point. Because it will not be in the form of legislation, it will not become an active legislative issue any earlier than the spring, and maybe late spring, of 2006. Therefore, it's unlikely to be considered any time within the next Congress. Among other issues that are still outstanding, of course, are some other tax issues and the absence of funding of the Pension Benefit Guaranty Corporation.

In summary, the long and short in my view is that we will not see relief on the fiscal side. In terms of the implications for our monetary policy deliberations, the implications of that were

less severe, I think, during the time when the economy was soft. The deficit spending, in fact, was stimulative at a time when stimulus was welcome. As we get closer to equilibrium, it seems to me that that changes.

So, it seems to me that at the very least we will be proceeding with an absence of fiscal discipline. What that will mean, among other things, is that it will add pressure, I would think, to the external funding of our current account deficit. And it will certainly raise questions as to the willingness and the appetite of the U.S. Congress and the U.S. people for maintaining a stable economy and a stable currency. Thank you.

CHAIRMAN GREENSPAN. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. As many of you have remarked, underlying demand has shown a surprising degree of vigor over the intermeeting period. Strength in final demand should show through to output as the mini-inventory cycle works itself out. This strength, together with revisions to estimates of the level and rate of growth of potential GDP as a consequence of the NIPA revisions, suggests that the economy is probably a little closer to its long-run sustainable production than we had thought. A smaller output gap, in combination with further increases in oil prices—some portion of which is likely to show through to core prices for a time—in turn suggests that inflation risks are a little higher and raises questions about our policy strategy. In my view, although the risks have shifted a little, they have not shifted enough to throw us off our presumed policy path of measured increases in interest rates, and I would continue to indicate that in our statement.

I agree with the staff forecast that the increase in final demand is likely to slow going forward, as we continue to raise rates. The surprise was not in investment, which continues to be a bit on the weak side relative to fundamentals, but rather in consumption, which is already quite

strong. In part, the unexpected strength reflected auto incentives and is borrowed from spending in the future. The increase in consumption required a further decline in the saving rate from an already low level, a pattern not likely to be sustained absent continued very sharp increases in housing prices. In that regard, at some point rising short-term rates—and recently long-term rates—should take their toll on housing price appreciation. To be sure, to date the indications of cooling housing markets are anecdotal, such as those we heard from President Guynn; they're not yet data-based. But if, as many assert, the demand for houses is being supported to a considerable extent by ARMs and exotic mortgages tied to short-term rates, the effect of monetary policy tightening should, if anything, be greater than in the past, with the housing wealth channel bearing more of the adjustment.

In addition, the further rise in energy prices is likely to shave something off spending, or at least postpone the time when energy prices are no longer holding back growth. And the positive contribution to final sales from net exports in the second quarter appears to be a short-term quirk in either data or behavior. Moderate growth abroad, together with our outsized demand for imports, should once again begin to damp demand on our own productive resources.

Moreover, incoming data on prices and compensation continue to indicate, to my mind, that there is some slack remaining, which is working to contain price pressures. Although core PCE data for 2004 and before were revised higher, incoming information about the most recent several months has suggested an appreciable short-term deceleration. The recent price data were, in fact, lower than anticipated. In effect, the data tended to confirm that the higher rates of inflation earlier this year were temporary, probably reflecting the increases in price levels of oil and other imports, and that inflation is not on an upward track. These data have been consistent with an economy producing somewhat short of its sustainable potential. Compensation data

have been contradictory and confounding, but it seems hard to believe that the surprisingly soft numbers for the ECI in Q2 and Q1 were drawn from a labor market under pressure, perhaps giving some more weight to President Poole's comments on the anecdotal information there.

Even the productivity numbers are somewhat ambiguous in their implications for cost and price pressures. Although past productivity growth appears to have been lower, and the staff marked down its estimate of structural productivity growth for 2005 and beyond, actual productivity data for 2005 are running at a higher rate than had previously been anticipated. The estimate for the first half of the year was revised up to 2½ percent, and the current quarter is projected to be substantially higher than that.

Market participants seem to think the measured pace of policy tightening will be adequate. They have added to the extent of the tightening but not the pace. And inflation compensation, as President Lacker noted, while edging a little higher over the intermeeting period, remains much lower than it was just a few months ago, despite the further increase in energy prices.

Finally, I think the strategy we have followed of tightening at a measured pace and being transparent about our intentions has a number of advantages. In particular, following this strategy—especially compared to one of larger increases or those that weren't well predicted by the market—reduces the odds of significant overshooting. Gradual changes enable us to get a better handle on their effects on the markets and the economy as they are happening. Their predictability means that they are incorporated into financial conditions more readily and accurately, bringing forward their effects on financial conditions and making observations about their likely impact on the economy more accurate and timely.

And I wonder whether this strategy isn't going to be especially useful given the uncertainty about how our actions could affect housing prices, construction, and consumption. Increasing rates will affect housing markets. Indeed, that's a necessary condition for constraining inflation pressures. But increased uncertainty about the strength of this channel, given the changing nature of mortgage markets, reinforces the arguments for a gradual approach to policy, if possible.

I agree that the incoming data should reinforce and strengthen our intention not to allow inflation and inflation expectations to rise from here. I'm encouraged by the reaction of markets to the news over the intermeeting period in adding 50 basis points to the string of expected gradual increases in the funds rate. This shows that they are not constrained by our language from marking up long-term interest rates, and it strikes me as the right response, at least for now. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. Governor Bies.

MS. BIES. Thank you, Mr. Chairman. I want to focus my comments today on some macroeconomic perspectives and on what we're learning in the supervisory reviews of mortgage products that we and other regulators are undertaking now.

On the positive side, when we look at the large volume of ARMs in existence, most of them are of the traditional form. And currently those ARMs are at a point—whether they're adjusted annually or they started out as 3-year fixed-rate loans and then move to annual adjustments—where they will be reset. For the ones that started out in 2002 with fixed rates for three years, this is the year when they will go to annual resets. We know all of them, since they're indexed to short-term rates, are going to have a big increase whenever their anniversary comes up in the second half of 2005 and into 2006.

To the extent that long mortgage rates or the reindexed rates are very close to those available to most borrowers on refinancings, it looks as if most of these ARMs can be converted into a fixed-rate product without a large amount of payment adjustment. There will be some, but it seems likely to be manageable for many of these borrowers.

On the other hand, we're seeing a lot of subprime ARMs where this may not be true. As you know, those ARM products that have been pushed into the subprime market are much more problematic. So the affordability for that group of customers is questionable. They are going to be hit not only by higher gas prices but higher monthly mortgage payments when their rates are reset. And that is going to be more of an issue as we go forward and as we continue to raise short-term interest rates.

Also, I'm a bit more pessimistic about what is happening with regard to some of these option ARMs and the more esoteric ARMs that are being marketed and have been marketed particularly in the last nine months. Bankers as a whole I think clearly are doing a good job at underwriting these. We have some lenders on the edges, though, that we're working on.

But these mortgage market developments have some significant macroeconomic implications. Many of these loans started out with teaser rates that were below current market rates. So first of all, the rates have to catch up to the market level. Then also, the index to which the rate is tied will have moved up by about 250 or more basis points, say, by the end of the year. So if they are interest-only loans, the rate could go from something that maybe started out with a "1" and could get to something with a "4" in front of it. And all of a sudden the monthly payments are going to go up fourfold. Even if defaults don't increase, it certainly is going to pull a lot of discretionary income out of spending and have some implications down the road.

Another issue is that apparently many of these loans have limits on how much the payment can go up each year in order to try to make the annual adjustment easier. But that puts borrowers in a predicament because it throws them into negative amortization. During the teaser period, they're in negative amortization; and the cap on the index used to reset the monthly payment could put them further into negative amortization. So if they do want to get out of the ARM and switch to a fixed-rate loan, they have to cover the additional negative amortization. Many of these loans have prepayment penalties, so the lenders recoup that. That may be problematic in moving more people into fixed-rate products as interest rates rise. And to the extent borrowers go to fixed-rate mortgages, they'll go to fully amortizing loans, which could be a financial burden—even though we are beginning to see mortgages of 40 years and longer. The leverage that we see in households on their borrowing I think is another indication that if they're stretching to be able to afford these houses, it will be more problematic for them to stay in the houses as their monthly payments go up—perhaps even double or triple.

So, when we talk about the wealth effect of housing price bubbles, I'm getting concerned around the edges that we could see a major impact on cash flows of both subprime and prime borrowers because these ARMS are indexed to short rates and those rates are moving up. Since ARMs are a big chunk of the mortgage market today, we have to realize that we can't just look at long-term mortgage rates and the affordability of housing. We need to look at the short rates, too, because they're getting to be more and more important.

As I look overall at the economy today—and I'm going to echo some of the comments I've heard around the table—I'm very comfortable that we have gotten past the soft spot of the spring. I also am a little pessimistic regarding how this recent bounce will be sustained. But I think we do have a strong foundation going forward, with growth somewhere in the mid-threes.

And in my view, that is a good pace of growth. I also believe, to echo the comments Governor Kohn just made, that the market has reacted to the understanding that we may have to push rates up even further. There is a tremendous amount of liquidity in the market, and I think that's what the market is seeing. When we talk about accommodation, the market is looking at the liquidity that can flow into deals for both commercial activity and for consumers. So I think we need to continue to push the funds rate upward. And personally, my number for the upper limit on the funds rate is much higher today than it was three to four months ago.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. The incoming data show broad-based support for growth, with inflation—at least in the most recent readings—relatively well contained. Final demand seems to be robust, with consumers, housing, and to some degree business investment spending, all making contributions. No doubt some of these data have been helped by the surprising success of the latest set of incentives from the auto companies, which boosted consumer spending and led to an unexpected slowdown in inventory investment. However, underlying financial conditions, the creation of wealth and jobs, and both consumer and business confidence I think provide a more lasting, sustainable basis to growth going forward.

While it's hard to have a great deal of confidence in the saw-toothed quarterly pattern that we see in the Greenbook, I think the baseline forecast in the longer term is amply supported by the facts. And in my view, a continued execution of our announced policy of a gradual removal of accommodation is in order.

However, there were a sufficient number of surprises in the intermeeting period—and, as David said, a sufficient number of moving parts in the Greenbook—to warrant a closer

examination of a number of issues. Given the time, however, I'm going to focus my comments on only one of those. I think the most important issue from a policy perspective is whether it is reasonable to accept, as a basis for today's decision, the staff's forecast of inflation stabilizing, albeit at the very upper end of what I believe is this Committee's acceptable range.

The baseline staff view of this relatively benign inflation dynamic can certainly be called into question, given a range of sources of uncertainty and inflation pressures. Those uncertainties and inflation pressures come from a number of factors: the mixed data that we've seen of late on labor compensation; the upward movement in the price of oil; the recent changes over the last several quarters in unit labor costs; and our new understanding that PCE prices were on a steeper upward trajectory and that structural supply-side growth may have been slightly less robust than we had thought before the NIPA revisions.

To attempt to answer this question, I sought to validate the Greenbook inflation forecast, and I'd like to hand out some tables that indicate the results of this work.² What I asked the staff to do was to assess the historical performance of several alternative measures of inflation as predictors of one-year-ahead inflation—CPI inflation in particular. And here I think I owe a slight apology to Gary, because I came to some statistical conclusions that were somewhat different from his instinctive conclusions.

If you look at the table I've handed out, the first page shows what is called the root mean squared prediction error of alternative forecasts of one-year-ahead CPI inflation. The set of forecasts that I looked at is pretty obvious: the Greenbook, the SPF [Survey of Professional Forecasters] CPI forecast, the CPI random walk, and the median CPI random walk using the Cleveland median CPI. In the second to leftmost column you'll see that over a long period—

² The materials referred to by Mr. Ferguson are appended to this transcript (appendix 2).

from the third quarter of 1981 to the first quarter of 2004—our Greenbook forecast has turned out, at least on this relatively simple measure, to have been the best of the forecasts. The random walk forecast tends not to be so good, but other forecasters externally have also done pretty well.

You can look across the various periods and see that, by and large, the staff forecast tends to be the historical winner. Curiously, as you get to the far right column, which covers the period beginning in 1999, we can add in important information—the compensation from TIPS. Again, I think it gives a relatively good forecast of inflation. And then the one measure here that is not self-explanatory is the adjusted TIPS. There, our staff has adjusted the TIPS to eliminate the best estimate that we have of the liquidity premium and inflation risk premium based on a term structure model. And if you look at the adjusted TIPS, at least in the short period of 1999 to 2004, you can see that the adjusted TIPS measure tends to be somewhat better than almost any of the others. So, by and large, we'd say overall that the market seems to have a really good forecasting record in the short term. And in the longer term, our Greenbook forecast seems to be the best and is probably somewhat better than the random walk.

Turning to the second page of the handout, given that background of what we can trust, I think the good news here—again, I had to do this on the CPI forecast—our staff's CPI forecast seems to be pretty much in the middle. We are not an outlier. The other good news, particularly if one trusts the adjusted TIPS information, is that it also seems to be quite consistent with the Greenbook forecast. So I took this to basically say at the end—and I want to be relatively short here, given I'm the last speaker—that we can be reasonably confident in basing our policy today on the Greenbook inflation forecast. There clearly is an upside risk to that forecast, I think. But as both other forecasters and a variety of market-based indicators all signal, it would be very hard for us to find at this stage a better inflation forecast than the one the staff has given us. So

while there's obviously some uncertainty, I'd say let's build our policy approach around the baseline forecast, and let's continue with the market-accepted approach that we've already announced of a gradual removal of our accommodation. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. Thank you very much. Let's move on to Brian Madigan.

MR. MADIGAN.³ Thank you, Mr. Chairman. I'll be referring to the package of charts distributed during the break entitled "Material for Briefing on Monetary Policy Alternatives."

Your monetary policy discussion today takes place against a backdrop of significant revisions to the economic outlook and substantial changes in financial market prices. As shown in the upper left-hand panel of exhibit 1, market interest rates rose considerably over the intermeeting period, pushed higher by a steady stream of data releases suggesting greater momentum to aggregate spending and output, some signs of heightened inflation pressures, and indications from policymakers that measured firming would continue in coming months. Yields on nominal Treasury securities climbed 45 to 50 basis points, bringing the 10-year yield above 4.4 percent. As shown in the upper right-hand panel, one-year forward rates ending one year ahead through 10 years increased appreciably, although the larger part of the increase occurred near the front end of the curve—a common pattern when yields respond to signs of strength in the economy.

The middle left-hand panel indicates that real yields as read from inflation-indexed Treasury issues rose about in line with nominal rates. As shown in the middle right-hand panel, market participants evidently expect that you will counter the perceived increase in aggregate demand and inflation pressures with additional policy restraint, as CPI-based inflation compensation rose less than 10 basis points on net over the intermeeting period. Inflation expectations thus appear to have been remarkably little affected by the \$5 per barrel further rise in spot oil prices over the intermeeting period (the black line in the lower left-hand panel) and the more than \$3 increase in far futures crude prices (the red line) to record high levels.

Likewise, equity prices, shown in the lower right-hand panel, seem to have been held back little by the further rise in energy prices. Indeed, boosted by strong earnings reports, the Wilshire 5000 index climbed 2¼ percent while the Nasdaq surged 4½ percent. The apparent enthusiasm about business prospects was mirrored in corporate bond spreads, not shown, with the spread on high-yield issues dropping more than 60 basis points.

³ The materials used by Mr. Madigan are appended to this transcript (appendix 3).

Market participants sharply marked up their expectations for monetary policy firming. As shown in the upper left-hand panel of your next exhibit, investors appear to have boosted their forecast for the peak federal funds rate from around 3¾ percent as of the last FOMC meeting (the dotted line) to just above 4¼ percent (the solid line). And whereas previously investors had anticipated a slowing in the pace of tightening this autumn, the steepening visible in the left-hand part of the panel indicates that market participants have significantly raised their expectations for policy action over the next several months.

This revision in near-term policy expectations can be seen even more clearly in the step-path in the upper right-hand panel, which portrays market expectations for your actions at each of the four remaining meetings this year, as given by our reading of fed funds futures quotes. The uptick for the August meeting from 3.46 percent to 3.49 percent indicates that investors have gone from fairly sure to essentially certain of a 25 basis point move at this meeting. Especially striking are the upward revisions to expectations for the November and December meetings. Previously, only a very small probability was assigned to a move in December, but that likelihood has now been marked up to above 50 percent. Despite these upward revisions, the 4.09 percent rate after the December meeting suggests that investors still see high odds that you will take a pass at one of the meetings over the balance of the year, most likely in December.

This pattern of expectations is reflected in the Desk's survey of the 22 primary dealers. As shown in the lower left-hand panel, on average dealers assigned a 93 percent probability to a 25 basis point move at this meeting, 84 percent for September, and 76 percent for November. For each of those meetings, both no action and a 50 basis point move were also seen as possibilities, with the likelihood of a pause still slightly outweighing that of a policy acceleration.

As indicated in the middle panel, for today's meeting, dealers almost unanimously expect you once again to judge the current stance of policy as accommodative, to assess the risks as balanced, and to retain the "measured pace" language.

As shown in the right-hand panel, dealers were also surveyed as to their estimates of the neutral nominal funds rate. Their average estimate of the most likely neutral nominal federal funds rate—4¼ percent—is consistent with that suggested by the pattern of money market futures quotes. However, dealers were also asked about their range of estimates, and the average responses, indicated by the "low" and "high" entries, suggest a significant degree of uncertainty. Dealers' average forecast that core PCE inflation will be about 2 percent in mid-2006, not shown, seems to suggest that their 4¼ percent average estimate for the nominal funds rate translates into roughly a 2¼ percent estimate for the equilibrium real funds rate.

As shown in the top panel of exhibit 3, an equilibrium real federal funds rate in a range of roughly 2 to 2¼ percent is also consistent with both a range of model-based staff estimates (the red band) and the Greenbook forecast (the green dashed line). As indicated in the upper part of the lower panel, the range of model estimates has narrowed substantially this round. In the June Bluebook, the right-hand column, the estimates went from 1.5 percent at the low end to 2.8 percent at the high end, but in this Bluebook they are relatively tightly clustered roughly between 2 to 2¼ percent.

The width of the red band, however, should not be interpreted as a confidence interval. Rather, 70 and 90 percent confidence intervals capturing uncertainty about model specification, coefficients, and the level of potential output are denoted, as usual, by the dark and light shaded areas in the chart. According to these rather wide intervals, the real funds rate could already be above its equilibrium level or remain well below it.

Moreover, at least some of these estimates of the equilibrium funds rate are subject to uncertainty regarding the outlook for a range of exogenous variables. This point is made using a different framework in exhibit 4. This exhibit shows the results of a benchmark scenario and two alternative scenarios that are prepared using the version of the FRB/US model with forward-looking investors and assuming optimizing policymakers whose outlook is similar to the staff's. The benchmark scenario, denoted by the black lines, captures economic conditions and inflation pressures as interpreted judgmentally in the Greenbook and extended through 2012. But in the benchmark scenario as well as the two alternatives, policymakers pursue an optimal policy rather than following the funds rate path of the Greenbook or a Taylor rule. Specifically, policymakers minimize the sum of squared deviations of unemployment from the NAIRU, deviations of inflation from an assumed 1½ percent target, and changes in the federal funds rate. Under that benchmark scenario, the federal funds rate moves up gradually to about 4½ percent, a little higher than in the Greenbook, and then drops back to 4 percent, as core PCE inflation tilts down toward its assumed target of 1½ percent and the unemployment rate varies narrowly between 5 and 5¼ percent. This scenario, by the way, assumes that the currently very low term premium in bond yields rises gradually, reaching its historical average level in 10 years.

The red lines are based on the "stronger demand" scenario that was discussed in the Greenbook, with personal consumption, residential investment, and business investment expenditures all considerably stronger than in the baseline scenario. Here, policy tightens much more steeply than in the baseline. And, with financial markets immediately recognizing both the positive shock to demand and the resulting tightening of monetary policy, nominal bond yields promptly jump to about 5¼ percent. As shown in the lower panel, inflation initially drops below baseline under this scenario because the sharp tightening of monetary policy induces a substantial appreciation of the dollar and because

the modest initial decline in unemployment below the NAIRU, the middle panel, imparts little momentum to inflation.

The blue lines in this chart focus on a topical issue—the unusually low term premium in bond rates. This scenario addresses the question: What would happen if the term premium jumps 80 basis points, thus reverting immediately to its historical average? Here, the assumption of forward-looking policymakers and markets is key. To offset the incipient upward pressure on bond yields arising from the increased term premium, the Committee eases policy considerably relative to baseline. Investors see right away that you are, and will be, taking countervailing action. Consequently, as shown in the upper right-hand panel, the effect of the higher term premium on bond yields is essentially offset by markets' correct anticipation that the stance of policy, as gauged by the nominal funds rate, will be easier over the next 10 years. As shown by the lower and middle panels, this policy is nearly completely successful in eliminating the effects of the term premium shock on the real economy and inflation.

Certainly, these alternative simulations contain some extreme elements—the large shock to aggregate demand in the first, the immediate substantial jump in the term premium in the second, and the assumption of immediate recognition of the shocks and a high degree of forward-looking behavior in both simulations. But they nonetheless illustrate some useful lessons. First, it is easy to imagine that the economy or financial markets could evolve in such a way as to require a federal funds rate notably above or below the rather concentrated 4 to 4¼ percent center of gravity that currently seems to be suggested by the R* measures, fed funds futures, and dealers' expectations. And the second scenario in particular suggests the potential value to policymakers of being able to decompose changes in nominal bond yields into expectation and term-premium components.

Even acknowledging the uncertainties illustrated by these scenarios, though, the weight of the evidence seems to suggest that monetary policy will need to firm at least somewhat further in coming months. Accordingly, the Bluebook once again presented three policy alternatives, summarized in your final exhibit, that each would involve a further increase in the federal funds rate at this meeting.

As shown in the second column, under alternative A the funds rate would be boosted a quarter point today, but the language in your announcement would hint at an imminent downshift in the pace of tightening. With the real funds rate currently at only about 1¼ percent, it seemed implausible to propose statement language suggesting that the end of the tightening cycle was just around the corner; a suggestion of a pause, with further tightenings to come, seemed a bit more relevant to current circumstances.

At the other end of the spectrum, alternative C, the fourth column, could be motivated by a sense that the real funds rate is currently well below its equilibrium, possibly far enough below that an intensification of inflation pressures could already be in train. To move more rapidly to close the real rate gap, this alternative would raise the funds rate 50 basis points at this meeting. Moreover, the statement would convey fairly serious concern about both the strength of aggregate demand and rising cost pressures. With a move of this size, the Committee would presumably no longer express a view that future policy moves would occur at a measured pace and might take the opportunity to eliminate other forward-looking elements of the statement as well.

Under alternative B, the Committee would stick with its established program by firming policy another 25 basis points today, retaining the assessment that the risks to growth and inflation should be balanced with appropriate policy action, and reiterating that policy firming likely can continue at a measured pace. However, the proposed language in the “rationale” sentences of the announcement—those characterizing real activity and inflation—have been modified significantly. These changes could be read by investors as conveying a bit more concern about the pace of demand growth and the degree of inflation pressures than they had expected.

In weighing alternative approaches to near-term policy, policymakers as usual would seem to have to make some key judgments. These include, for example, whether the staff is correct in its assessments that only a bit of slack remains in the economy, that current financial conditions are consistent with a near-term slowing in the growth of aggregate demand to a pace in line with that of the economy’s potential, and that core PCE inflation will probably remain near 2 percent over the forecast horizon with a continuation of gradual tightening. The staff could be wrong in those assessments, but if so it will likely have a good deal of company among financial market participants.

That concludes my prepared remarks.

CHAIRMAN GREENSPAN. Questions for Brian?

MR. FERGUSON. Just one. Brian, you had on exhibit 4 an interesting simulation in the scenario with a higher term premium. But an alternative you didn’t simulate is what happens if the relatively low term premia that we are observing now stay in place for some time. There are a number of people who think that that has short-term implications for policy. I’m not sure about that. It might over time, but I’m not sure it has implications for the next several meetings.

MR. MADIGAN. I think that would not be notably different from the Greenbook scenario where essentially we do have the term premium going away but very slowly.

MR. FERGUSON. Okay. So in some sense, the Greenbook scenario covers the current situation, and then a very, very gradual movement up in the term premium.

MR. MADIGAN. Yes.

MR. WILCOX. The Greenbook baseline does.

MR. GEITHNER. So you have the same path here for the reversion of the term premium to its historic average as is in the Greenbook baseline?

MR. MADIGAN. That's right.

MR. FERGUSON. That's for a slow reversion, right? The other one that you have here involves a very rapid reversion.

MR. MADIGAN. Yes, that's correct.

CHAIRMAN GREENSPAN. Further questions for Brian? If not, let me add my thoughts, wherever they may go. [Laughter]

I thought it was quite interesting to hear the tone of this Committee's view that the inflation rate is gradually moving up and that's not particularly worrisome, except that basis points keep getting added to basis points and before you know it, the rate of inflation is higher than we want it to be. The undertone of resistance to that I thought was rather impressive and, I must say, it's a view that I share as well. The rate is being boosted by a thousand little hits which eventually get you, and suddenly you say, "How in the world did we get here?"

There are general concerns in the sense that the costs of national defense, homeland security, and the like are really quite substantial. But they don't seem to have impacted the cost structure significantly nor resulted in a marked slowing in productivity growth. We did, as you

know, have considerable concern that the rate of productivity growth in the second quarter was going to slow appreciably and that in the third quarter it wasn't going to move very much from that reduced pace. We thought that structural productivity might well be revised down and that, therefore, structural unit labor costs would increase, suggesting an acceleration in inflation. That apparently is not happening. That is, we are getting upward revisions in productivity on a month-by-month basis, so that concern is something we can basically put aside for the moment.

On the other side, there was a general tone in the comments around the table of concern about the acceleration in economic activity. But I think we ought to be a little careful in making a judgment on that, given that the pause in the second quarter was to a very large extent reflective of inventory investment falling away at a fairly significant pace, though the extent of that was not something of which we were aware until after the fact. Currently, we're seeing the reverse. Now, even though industrial production is not all that big a chunk of GDP, it is a significant aspect of the change in GDP. And the combination of motor vehicle output and non-motor vehicle inventory change suggests, as David pointed out, an automatic pop in the numbers. And that is what we're seeing. Is it an implication of an acceleration in economic activity? I would say "not necessarily." Were that the case, we would be seeing a tightening in markets. We'd see it in commodity prices, but we do not. We'd see it in delivery lead times, but we're seeing only a marginal increase there. In other words, the anecdotal reports and other usual evidence of markets tightening up are not there. We're not seeing the consequences of what inevitably has to be the case—that is, the loss of effective capacity as a result of increasing oil and natural gas prices. That's going to happen at some point, but it's not evident anywhere we can see it. So, what we're dealing with, as best I can judge, are gradual changes that are

increasingly of a tightening nature. But those changes are not showing up in any form that creates a sense of urgency to address them.

There are two areas of the outlook about which I think we know a great deal less than we'd like. One is oil and the other is housing prices. On the oil side, the futures markets, as you know, show a flattening out of crude prices. But when any commodity price is going up, futures prices always show a flattening out. The reason is that futures markets, while they may be the best estimate that exists of the market's expectation of prices in the future, are nonetheless a mechanism in which the demand in the immediate period is essentially spread out over the whole futures spectrum. And it's reflected in the fact that the upper end of futures prices relative to the spot price cannot be more than the carrying charges. If it is, what happens is that the spot price gets pulled up in the process.

So, at this stage what we're looking at is the market's best forecast of the longer-term outlook for oil prices. But as a quick look at history will tell us, the futures price has a terrible record as a forecast. Therefore, it's not all that useful, especially when we're looking at very odd underlying fundamentals here. If one looks at the production numbers and demand as currently measured, we're running into a big increase in inventory accumulation in the second half of the year. And one would presume, as I guess Lee Raymond does, that that implies the markets are going down.

But we also have the other side of this problem where all of the proved reserves are in areas with nationalized oil industries and, therefore, the ability to bring to bear financing from the international oil companies is very significantly limited. Indeed, in the case of Mexico, it is constitutionally prohibited. And as the populations in these oil-producing areas are growing fairly rapidly, an ever-increasing part of the cash flow from oil revenues is going for domestic

welfare needs. So even though the prices are going up and the revenues and cash flows are going up, there appears to be a shortage of cash available to convert the proved reserves into effective operating capacity, meaning drilling and infrastructure. Even though the numbers look reasonably good, what we have had in the last few years, after a long period of very small increases in world oil demand, is that demand has suddenly tilted up as China and India have come on the scene. And after a fairly significant amount of non-OPEC production, which turns out to have been largely Russian, now we're getting some evidence of nationalism in the Russian oil industry, and production growth there has slowed very materially. Hence, the outlook for any slack we generally might have is questionable. And one of the serious questions is: Are we underestimating long-term demand growth so that even though there may be production out there, the gap is closing from the demand side?

But most of the concern, as Karen pointed out, is on the supply side because one can list a number of fragile oil-producing areas and a whole series of possible supply interruptions. Anything can go wrong. Indeed, one indication of how sensitive the market is can be seen in the reaction to every flicker of a potential hurricane in the Gulf of Mexico. That is not the biggest oil-producing area of the world, but when there's even a hint of a hurricane in that region, crude prices pop. As a consequence, we may have a sense that we're looking at a short-term glut, but the prices are seeing through the glut. That's, indeed, the convergence of the long-term 6-year futures price to the spot price. For a long period of time we had a big surge in the spot price and the 6-year futures dragging along barely, with the gap opening up. In the last year that gap has closed very dramatically, which suggests that there's a fundamental concern in the marketplace that the long-term capabilities of this market are not sufficient and that a price of \$60 or \$65 a barrel for crude may not be the low number. Just remember, the price got up to the equivalent in

today's prices of \$90 for WTI back in the 1970s. All we can say that's fortunate about that comparison is the fact that the amount of oil used per unit of GDP is down very significantly. So, there is no basic long-term concern, but there is a short-term concern here, which I think raises questions about inflation and about the contractionary characteristics of oil price increases. So it's a very difficult mixture.

On the housing area, the real problem is not actually the boom or how far it's going or whether it is a bubble or the like. The real issue is this: When it diffuses, as it will one way or the other, what are the implications? The serious problem that will arise when that happens relates to the question of what is the marginal propensity to consume out of housing wealth. The problem that I think we have is that the impact from a slowing or decline in house appreciation—or more explicitly the effect of housing capital gains on the one hand and of stock capital gains on the other—would be a far greater contraction in consumption than indicated by a standard reduced form system, which we currently have in our models—namely, the wealth effect.

What bothers me is that we may, in fact, be looking at much higher marginal propensities to consume from housing capital gains. And, as housing turnover slows, cash-outs will slip and the amount of equity extraction will fall quite significantly. In fact, implicitly the Greenbook has a very substantial fall in equity extraction, as you know. Mortgage debt is shown to slow down very materially. The key question is: Is the marginal propensity to consume from equity extraction actually 0.3, which is the figure indicated in our surveys of cash-outs and other surveys? If one assumes that that's the impact on consumption, that accounts for virtually all of the decline in the saving rate, and it would imply a reversal—a very significant rise—in the saving rate. And that is the other side of the question of what kind of consumption pattern we will see going forward.

Implicitly our existing model, which endeavors to differentiate the marginal propensity to consume from wealth creation from stocks and wealth creation from housing, is incapable of distinguishing any difference in the marginal propensity to consume from those two sources. And instead of 0.3, the implicit number is well under 0.1. As a consequence, even though the Greenbook forecast has a significant implicit decline in mortgage debt expansion, we do not get the type of marginal slowdown in personal consumption expenditures—and I might add modernization expenditures—that is implicit in the survey data. The trouble is that we cannot know the answer at this stage to the question about the marginal propensity to consume out of housing wealth.

International data are more suggestive of a higher propensity to consume. Australia's PCE slowed down very dramatically with the slowing in house price appreciation there. The same was true in the United Kingdom. And that's an issue about which I'm fearful we will not know the answer for the United States until we see it—when we find that equity extraction suddenly falls with a flattening of house prices and retail sales somehow begin to disappear. I'm not sure we can make judgments in advance as to how that will come out, but how it comes out may be the most difficult problem that we will be confronting. It doesn't seem likely to be imminent. It's certainly not the case that housing starts are falling off dramatically. Indeed, the backlog the large builders have on starts is still very high. It is flattening out a bit but is showing no signs of weakness. Conceivably, in the event of a weakening in prices, a lot of that backlog will disappear. That may occur without our knowing where it's coming from, but people will just pull away from the housing market.

So, we do have problems out there, and I don't think we really have a great deal of confidence in the outlook implicit in this forecast of an ongoing, very smooth and very

impressive expansion in the economy. I'm certainly not arguing that I wish it were otherwise. This is as good an economy as one can get. It's just that we have to look down the road and see what's out there. And what I see are a couple of possibilities that should make us want to exercise some caution, although none of the potential problems, as best I can judge, is imminent. There's nothing out there that indicates that something is about to fall apart. But as we get into 2006, I feel that the tranquility we are forced to exhibit—because the forecast is a point estimate in all of our projections—may be a bit overdone.

In summary, I think we're on the right path. I don't think there's any urgency to consider accelerating the path nor, of course, pulling it back. I share the view expressed by a number of you around this table in that I'm delighted that the futures markets have jacked up the implicit longer-term projection of the funds rate quite significantly, and I think certainly to the right dimension. And as I've said here before, my impression basically is that when the economy starts to change, the markets are going to be moving ahead of us and probably will conclude pretty much as we would conclude when we meet. If that is indeed the case, as I mentioned earlier, the most probable outlook is that the markets are going to tell us when we have finally reached the point where this program of increasing the funds rate is over and a pause is implied.

It is conceivable that we may have to change the language abruptly, which will change the market's expectations and cause some disruption. I think that probably will not happen. Judging from the way we and the markets have interacted, we're all looking at essentially the same play book, and I think we are likely to come out with the same conclusions. If that's the case, the period of about six weeks that we're going to have between one meeting and another at the point we're going to change is probably going to be enough time for the markets to adjust and effectively to tell us: "This is what we expect you to do when you walk into your next

FOMC meeting.” And that, indeed, is likely to be what we’re going to want to do. We’re going to change the language. We’re going to change, in fact, the way we produce our statement. And hopefully we will have phased into the next stage of monetary policymaking in a less disruptive way than we probably fear—or at least that I fear. But that’s for the future.

For now, I think the appropriate action is a move of 25 basis points and pretty much the alternative B statement that is shown in Brian’s table. So I’d like to put that proposal on this table and get your reactions. President Poole.

MR. POOLE. Thank you, Mr. Chairman. I support the recommendation for 25 basis points, and I support the recommendation that we repeat the statement. I would have two suggestions on the rationale part of the statement. First, in row 3 I would eliminate the word “gradually” and just say “labor market conditions continue to improve.” Second, in row 4 I think the syntax would work a bit better if there were two sentences reading “Core inflation has been relatively low in recent months, but pressures on inflation have stayed elevated. Longer-term inflation expectations remain well contained.” I just think it reads a little better. Paradoxically perhaps, I think that repeating essentially the same language actually gives us maximum possible flexibility in the future. Anything that we might try to change would open up the possibility of misinterpretations in the market.

Looking ahead, I think it’s going to be simple at some point to add to the statement or to have the statement say that monetary accommodation has been substantially removed. The tricky part—the tough issue that we will have to deal with—is whether in the future we will want to have some forward-looking guidance.

CHAIRMAN GREENSPAN. We may not be able to. President Yellen.

MS. YELLEN. Mr. Chairman, I support your recommendation and agree with the rationale that you gave for it.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. I support your recommendation, Mr. Chairman, and I look forward to working on evolving the statement language for use at some point.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, I think we're a little behind the curve. But I don't see a better solution in terms of going forward, so I support your recommendation.

CHAIRMAN GREENSPAN. President Santomero.

MR. SANTOMERO. I support your recommendation, Mr. Chairman. The only thing I would do to adjust the alternative B language is to think about removing the word "gradually." If this is gradual, I don't know what rapid is.

CHAIRMAN GREENSPAN. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I support your recommendation. Unlike President Minehan, I don't really look forward to evolving the language. [Laughter]

On the "gradually" issue, I guess I don't think things have changed all that much. If we look at 6-month moving averages of employment growth, we've been stuck in the same range for quite a while now. The initial claims have come down a little, but they haven't really come down that much. So in my mind, improving gradually means that we're gradually using up what little remaining slack is there. And I don't think the situation has changed materially over the intermeeting period; those averages remain about what they were. We're somewhat above the sort of steady state that we need.

MR. SANTOMERO. Just to rejoin, I wouldn't describe this as a "rapidly" improving labor market but I would argue that it is improving—period. That's probably a better characterization of the last 12 months, the year to date, and the last three months. Numbers of 180,000 are indicative of a pretty good job market. That's the only issue that I would address. I wouldn't object to this wording. I just don't think it's as descriptive as it might be.

CHAIRMAN GREENSPAN. I think Bill Poole's caveat is right here. Even if you're technically correct, it's questionable how much we want to change the statement language if we don't have to.

MR. SANTOMERO. That's fine.

CHAIRMAN GREENSPAN. You know, initial claims have not moved all that much since the last meeting, so it's a little hard to make the case. And any word that we change now, since we're changing so little, is going to be made more of than I think we'd want because there are so many people out there who are being paid to read this statement and interpret our meaning. So, I think we have to be a little careful of that. Unless something in the statement is obviously getting to be incorrect—clearly, we can't have that—it's probably better not to make a change.

MR. SANTOMERO. Fair enough.

CHAIRMAN GREENSPAN. President Pinalto.

MS. PIANALTO. Mr. Chairman, I support your recommendation. And given the comment that you just made about the less we change the statement the better, I do like President Poole's recommendation about the order of the wording in section 4 because that is a little more like our previous statement on inflation. Also, given our comments around this table that inflation today is near the high end of where we'd like it to be, I don't want that first statement

about core inflation being relatively low to be misinterpreted as meaning that the current level of inflation is well within our comfort zone. I understand that it's hard to fine-tune this statement at this table, so I am comfortable with the language, but I do like President Poole's ordering of section 4.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. I, too, am comfortable with your recommendation, and I'm also happy to resist the temptation to change the language any more than necessary at this point. Going forward, my preference would be to continue, where possible, to provide some guidance. But that's an issue for another day.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. I support your recommendation. On the word "gradual," I actually would like to see it come out, too, but I don't feel that strongly about it. My logic was this: My recollection is that we put the word "gradual" in after a very weak May employment report that was originally 73,000 in payroll jobs and was revised up to 117,000. In June we had an increase of 164,000 after the revisions. In July the number was 181,000. And if you look at the private payrolls, something close to 181,000 has been a constant for a long period of time, with all of the revisions that have taken place. So I, too, think we could drop the word "gradually," though I suppose we could wait for one more employment report to see if that number is strong and take the word out next month. But I'd prefer to take it out today if possible.

CHAIRMAN GREENSPAN. President Fisher.

MR. FISHER. I support the recommendation, Mr. Chairman, and I'm indifferent on the word "gradually." I like President Poole's rephrasing of the fourth box down. I think it makes grammatical sense, but I'm not going to fight over it.

CHAIRMAN GREENSPAN. President Lacker.

MR. LACKER. I support your recommendation, Mr. Chairman. I'm relatively agnostic on language, though I slightly prefer President Poole's suggestion on section number four. If I were going to put my two cents in, I might suggest adding something along the lines of an "unwelcome further rise in inflation," but I'll wait.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Mr. Chairman, I support your recommendation. While accepting your arguments against fiddling with the wording, I must say that I also would prefer to take the word "gradually" out. And I share Sandy's concern that, read literally, the phrase "core inflation has been relatively low" could be interpreted as a comfort level, and I don't think that was the tone of our discussion. But I assume we can correct that interpretation with our comments, as we all go out and speak publicly, so I support your recommendation.

CHAIRMAN GREENSPAN. Governor Olson.

MR. OLSON. I support both the new target level and the language in alternative B. On paragraph 3, I did not try to compare it word for word with the previous characterizations, but my sense is that this is a significant change from the pattern we've used in that paragraph, and I think it's appropriate.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. I support your recommendation. With respect to the language, I think the most important set of changes here is not in paragraph 3 but

in paragraph 4. And I actually think having the language read the way it is written now in alternative B, as opposed to President Poole's suggestion, emphasizes the most important issue, which is that the pressures on inflation have stayed elevated. In my view that's really—

CHAIRMAN GREENSPAN. Leaving it at the end?

MR. FERGUSON. Yes, leaving it at the end. That is the policy-significant story here, and I think that picks up the general tone around the room. So I'm weighing in fairly strongly on not making this change. I understand the grammatical point that President Poole made. But in terms of the policy message, if we end with "pressures on inflation have stayed elevated," I think that's a significant enough change. It tells the market that we are awake and vigilant, and I believe that will help us to keep the inflation expectations pretty well contained, but President Geithner is closer to the markets than I am.

CHAIRMAN GREENSPAN. Governor Bies.

MS. BIES. Mr. Chairman, I support your recommendations. I really like paragraph four the way it is for the same reason Governor Ferguson just mentioned. I want to leave people with the message that inflation pressures are out there and are elevated, and I want to make sure that that message gets through. So I rather like it the way it is, even though it may not be as smooth grammatically.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN GEITHNER. I support your recommendation, and I agree on the arguments made in favor of retaining the structure of paragraph four. Let me just add one argument to those already made. Bill, if we look at your structure in terms of what we would be changing from the June language in section four, all we'd be doing is adding the thought that core inflation has been relatively low in recent months. So I think the net effect of that change

might be that it would come across as somewhat more reassuring than we would want. That's why I think the evolution in this language from the initial draft Brian circulated to the current draft is actually good in capturing the sense of what is slightly different in the outlook. So I think it has a slightly better balance as currently structured.

CHAIRMAN GREENSPAN. I must say that I was also pushing toward somewhat better syntax and a little better use of the English language. The trouble, unfortunately, is that the only way to do that is to move the last phrase up, and that creates policy issues in my judgment. So I'd prefer to have poor but clear language [laughter] because we certainly don't want to convey a message that will bring the long-term forward rates down. Everyone in the marketplace has agreed that we are going to move 25 basis points. If we move the longer-term forward rates in a significant way, we're going to have to adjust that, and that will be troublesome.

Would you read the appropriate directive?

MS. DANKER. I'll be reading the directive and the risk assessment from page 23 of the Bluebook: "The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee in the immediate future seeks conditions in reserve markets consistent with increasing the federal funds rate to an average of around 3½ percent." The risk assessment portion reads: "The Committee perceives that with appropriate monetary policy action, the upside and downside risks to the attainment of both sustainable growth and price stability should be kept roughly equal. With underlying inflation expected to be contained, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability."

CHAIRMAN GREENSPAN. Call the roll.

MS. DANKER.

Chairman Greenspan	Yes
Vice Chairman Geithner	Yes
Governor Bies	Yes
Governor Ferguson	Yes
President Fisher	Yes
Governor Kohn	Yes
President Moskow	Yes
Governor Olson	Yes
President Santomero	Yes
President Stern	Yes

CHAIRMAN GREENSPAN. Thank you. Shall we have a short recess so that the Board members can convene and address the issue of the discount rate?

[Recess]

CHAIRMAN GREENSPAN. The Board of Governors unanimously approved the requests of all 12 Reserve Banks for an increase in the discount rate of 25 basis points to 4½ percent. Our next meeting is Tuesday the 20 of September. But in the interim we will all meet, I gather, at Jackson Hole for thoughtful discussion and perhaps some golf and tennis. Luncheon is served.

END OF MEETING