

**Meeting of the Federal Open Market Committee on  
March 18, 2008**

A meeting of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington, D.C., on Tuesday, March 18, 2008, at 8:30 a.m. Those present were the following:

Mr. Bernanke, Chairman  
Mr. Geithner, Vice Chairman  
Mr. Fisher  
Mr. Kohn  
Mr. Kroszner  
Mr. Mishkin  
Ms. Pianalto  
Mr. Plosser  
Mr. Stern  
Mr. Warsh

Messrs. Evans, Lacker, and Lockhart, and Ms. Yellen, Alternate Members of the Federal Open Market Committee

Messrs. Hoenig and Rosengren, Presidents of the Federal Reserve Banks of Kansas City and Boston, respectively

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

Mr. Madigan, Secretary and Economist  
Ms. Danker, Deputy Secretary  
Mr. Skidmore, Assistant Secretary  
Ms. Smith, Assistant Secretary  
Mr. Alvarez, General Counsel  
Mr. Ashton, Assistant General Counsel  
Mr. Sheets, Economist  
Mr. Stockton, Economist

Messrs. Connors, English, and Kamin, Ms. Mester, Messrs. Rolnick, Rosenblum, Slifman, Sniderman, and Wilcox, Associate Economists

Mr. Dudley, Manager, System Open Market Account

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

Ms. Bailey, Deputy Director, Division of Banking Supervision and Regulation, Board of Governors

Mr. Clouse, Deputy Director, Division of Monetary Affairs, Board of Governors

Mr. Struckmeyer, Deputy Staff Director, Office of Staff Director for Management, Board of Governors

Ms. Liang and Messrs. Reifschneider and Wascher, Associate Directors, Division of Research and Statistics, Board of Governors

Mr. Gagnon, Visiting Associate Director, Division of Monetary Affairs, Board of Governors

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

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

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

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

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

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

Messrs. Altig, Rasche, Sellon, and Sullivan, Senior Vice Presidents, Federal Reserve Banks of Atlanta, St. Louis, Kansas City, and Chicago, respectively

Mr. Olivei, Vice President, Federal Reserve Bank of Boston

Mr. Pesenti, Assistant Vice President, Federal Reserve Bank of New York

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

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CHAIRMAN BERNANKE. Good morning, everybody. Let me extend a welcome to First Vice President Sapenaro, who is sitting in for St. Louis this morning. A quick comment on special topics: I'm sure we're all disappointed that we won't have further conversations on the communications strategy, [laughter] but that being the case, we have the opportunity to have special topics again. In April we will be discussing interest on reserves, as we mentioned before. We asked for suggestions for October, and a number of Banks proposed to look at inflation modeling, which seems obviously a good and policy-relevant topic. So that is what we propose to do in October. We look forward to Reserve Banks taking the lead on presentation and research in this area, and there will be meetings among the research directors and the System Research Advisory Committee to figure out how to go forward, but obviously we have about seven months to get to that. We look forward to having special topics. So the first item, Mr. Dudley, if you're ready.

MR. DUDLEY.<sup>1</sup> Thank you, Mr. Chairman. To start, I just want to update people on what happened overnight in markets. Equities rebounded a bit in both Asia and Europe, and bond yields reversed some of the decline that they saw on Monday. The dollar was slightly weaker against the yen and the euro but still in the range that it established. It did not go back below the lows that it reached early on Monday. I would say that generally the markets' function was okay. The big issue was bank funding pressures in Europe were evident for dollar funding. The funds rate bid as high as 3¾ percent, which is quite surprising on the eve of a meeting in which we are likely to reduce the federal funds rate target. Term funding pressures, if you look at the one-month or three-month LIBOR–OIS spread, are basically unchanged from Monday, when they were up quite sharply from last Friday.

Before talking about what markets have been doing over the six weeks since the last FOMC meeting, I'm going to talk a bit about the Bear Stearns situation. In my view, an old-fashioned bank run is what really led to Bear Stearns's demise. But in this case it wasn't depositors lining up to make withdrawals; it was customers moving their business elsewhere and investors' unwillingness to roll over their collateralized loans to Bear. The rapidity of the Bear Stearns collapse has had significant contagion effects to the other major U.S. broker–dealers for two reasons. First, these firms also are dependent on the repo market to finance a significant portion of their balance

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<sup>1</sup> The materials used by Mr. Dudley are appended to this transcript (appendix 1).

sheets. Second, the \$2 per share purchase price for Bear Stearns was a shock given the firm's \$70 per share price a week earlier and its stated book value of \$84 per share at the end of the last fiscal year. The disparity between book value and the purchase price caused investors to question the accuracy of investment banks' financial statements more generally.

The contrast in the behavior of investment bank equity prices versus credit default swap (CDS) spreads is revealing. Share prices fell sharply, but the CDS spreads narrowed a bit, indicating a lower risk of default. For example, Lehman's stock price fell 19 percent, but its CDS narrowed by 20 basis points, to 450 basis points, yesterday. This underscores the difference between the \$2 per share buyout price for Bear Stearns—less value than people thought—and the introduction of the Primary Dealer Credit Facility (PDCF)—a reduction in the risk that a liquidity problem could drive a firm into insolvency.

I have a few words about the PDCF, before moving to a discussion of market developments since the January FOMC meeting. The PDCF should help to restore confidence among repo investors. It essentially creates a tri-party repo customer of last resort—us. When investors have concerns about the ability of a dealer to fund itself, they are reluctant to roll over their own repo transactions. The reason is the fear that the clearing bank may not send their cash back the next morning when the overnight repos mature. This fear may not be misplaced. If the clearing bank is worried about whether investors will stay put, the clearing bank may decide to keep the cash. In that case, the investors would be stuck with the securities that collateralize the repo transactions. The PDCF should break that chain of worry by reassuring the clearing bank that the Fed will be there as a lender to fund the repo transactions. The repo investors are reassured that the clearing bank will send back their cash the next day and thus are willing to roll over their repo transactions. At least that's the theory. As noted, the PDCF should provide some comfort to the counterparties of these firms that these firms will, in fact, be able to fund their obligations. Yesterday, the major money market mutual fund complexes did roll their outstanding repos with the major investment banks. However, the jury is still out on whether the PDCF will be sufficient to stabilize confidence.

High use of the PDCF would result in a large increase in the amount of reserves added to the banking system. I think it is important to go on record on that because, if that were to occur, over the short run the New York Desk might not be able to drain reserves sufficiently quickly to keep the federal funds rate from trading extremely soft to the target. We will make all efforts to make the "short run" as short as possible. But realistically, there is a good chance that the federal funds rate could trade soft relative to the target, especially through the end of the current reserve maintenance period. In fact, yesterday we saw that, although it started the day quite firm, the funds rate crashed at the end of the day, and the effective fed funds rate for the day was 2.69 percent. It depends, in large part, on the volume of use of the PDCF.

Stepping back from developments of the past few days, recent weeks have been marked by rapid and, at times, disorderly deleveraging of financial holdings within the global financial system. As I discussed last week, the most pernicious part of this unwinding has been the dynamic of higher haircuts, missed margin calls, forced selling, lower prices, higher volatility, and still higher haircuts, with this dynamic particularly evident in the mortgage-backed securities market.

I'll be referring to the handout from here. Over the past six weeks, we have surveyed a number of hedge funds and one REIT about the haircuts they face for financing different types of collateral. As shown in exhibit 1, the rise in haircuts has been most pronounced in non-agency mortgage-backed securities. But even agency MBS have seen a significant widening of haircuts in recent weeks. The collateral funding pressures have been particularly evident for residential-mortgage-backed securities collateral. This is due to several factors including very unfavorable fundamentals for housing, a high level of uncertainty about the ultimate level of losses, and an overhang of product for sale, both currently and prospectively. In our discussions with market participants, unleveraged players have been unwilling to step in to buy "cheap" assets for several reasons. First, there are few signs that housing is close to a bottom. Second, a significant amount of product sits in weak hands and, thus, could be dumped on the market. Third, this particular asset class has characteristics that exacerbate price volatility and, therefore, risk. For example, when spreads widen and yields climb, prepayment speeds slow. This extends duration. When the yield curve is upward sloping for longer maturities, the rise in duration generates an increase in yields. The rise in yields also reduces housing affordability, which puts further downward pressure on home prices, increasing prospective losses on the mortgage loans that underpin the securities.

Signs of distress in this market include the following. First, a sharp widening in option-adjusted mortgage spreads—as shown in exhibit 2, option-adjusted spreads for conforming fixed-rate mortgages have widened considerably since the January 30-31 FOMC meeting, though they have come in quite a bit over the past couple of days. That's good news. Second, jumbo mortgage spreads relative to conforming mortgages rates remain very wide. As shown in exhibit 3, this spread has averaged more than 100 basis points this year. The current yield on prime jumbo loans is around 7 percent, a margin of about 3½ percentage points over ten-year Treasury note yields. Third, mortgage securities prices continue to fall. For example, as shown in exhibit 4, the prices for AAA-rated tranches of the ABX 07-01 vintage continue to decline. Fourth, Fannie Mae and Freddie Mac reported large fourth-quarter losses, and their stock prices and CDS spreads have performed accordingly (exhibit 5). The sharp decline in the equity prices has made the companies reluctant to raise new capital, despite the prospects of higher-margin new business, because additional share issuance at the current share prices would lead to massive dilution for existing shareholders. Fifth, the yield levels on many mortgage-backed securities have climbed significantly above the yield on the underlying mortgages that underpin the securities. This is the opposite of how securitization is supposed to work. This

phenomenon reflects the glut of supply of such securities on the market and the added risk premium attached to assets that are typically held on a mark-to-market basis.

Although the residential mortgage market is the epicenter of the crisis, distress has been evident much more broadly—with the municipal market fully implicated in the period since the January meeting. The deleveraging process evident among financial intermediaries operating outside the commercial banking system has led to a widespread repricing of financial assets. When available leverage drops, risk-adjusted spreads have to rise for leveraged investors to earn the same targeted rate of return as before. This helps explain why the problems in the residential mortgage market have infected financial markets more generally, leading to wider credit spreads (exhibits 6 and 7) and lower equity prices (exhibit 8) both in the United States and abroad. As leverage is reduced and spreads widen, financial arbitrage implies that all assets should reprice. The risk-adjusted returns from holding different asset types should converge—recognizing that the degree of leverage that is available in markets may differ across asset classes in accordance with divergences in price volatility, liquidity, transparency, and other characteristics.

Of course, the notion of convergence to equivalent risk-adjusted returns is an equilibrium concept, and we are not in equilibrium. The events of the past week underscore that point. But there are plenty of other examples of disequilibrium at work. For example, for mortgage-backed securities, the losses implied by the prices of the AAA-rated ABX index tranches appear to be high even relative to the darkest macroeconomic scenarios. The municipal bond market is also a good example of how market valuations can become unusually depressed when supply increases rapidly. Then the value inherent in the securities becomes broadly known, this mobilizes new money, and risk-adjusted returns come back down relatively quickly. Term funding spreads also indicate greater stress within the financial system. As shown in exhibits 9 and 10, the spreads between one-month and three-month LIBOR–OIS spreads have widened sharply in recent weeks, even before Bear Stearns's demise. We are sitting today at 56 basis points for the one-month LIBOR–OIS spread and 77 basis points for the three-month LIBOR–OIS spread, about the same as yesterday morning.

As you are all aware, we have been active in responding to the growing market illiquidity. Exhibit 11 illustrates the results of the TAF auctions. Note how propositions and the number of bidders have increased recently and the spread between the stop-out rate and the OIS rate has risen over the past few weeks. Even before the Primary Dealer Credit Facility was implemented this weekend, we were in the middle of a historic transformation in the Federal Reserve System's balance sheet. We are increasing the supply of Treasuries held by the public (either outright or borrowed) and reducing the supply of more-illiquid collateral held by the private sector. Even excluding the uncertain impact of PDCF borrowing, this shift will speed up noticeably over the next month or two. Our current plans are to increase the size of the TAF to \$100 billion, scale up the single-tranche RP book to \$100 billion, renew and increase the size of the foreign currency swaps with the ECB and the SNB

to \$36 billion outstanding (if fully subscribed), and implement a \$200 billion TSLF program. Exhibit 12 shows how these programs are likely to change the composition of the Federal Reserve's SOMA portfolio. As can be seen, when all the current programs are fully phased in by May, Treasury holdings will have shrunk to about 45 percent of the total portfolio, down from about 97 percent last July.

At the same time that financial markets have been under severe stress and the macroeconomic growth outlook has deteriorated, the inflation news has also been disturbing. Several market-based indicators are adding to investors' concerns about the inflation outlook. First, commodity prices have increased sharply. As shown in exhibit 13, the increases have been concentrated in both energy and agricultural prices. Of course, subsidies to stimulate the production of ethanol from corn have been an important factor. By diverting corn production to this purpose, the linkage between energy and grain prices has been significantly strengthened. Second, the dollar, after a period of stability that lasted from mid-December into February, has begun to weaken anew (exhibit 14). This has gotten considerable attention in the press and abroad as the dollar has hit new lows against the euro and has fallen below 100 against the yen. Up to now, the decline has generally been orderly, and the downward slope of the broad real trade-weighted dollar trajectory shown in exhibit 14 has not changed much.

The foreign exchange markets are clearly very skittish. In particular, there has been considerable focus on China and the Gulf Cooperation Council (GCC) countries and their willingness to maintain their pegs against the dollar. For China, investors expect its crawling peg to move faster. As shown in exhibit 15, the Chinese yuan is now expected to appreciate about 11 percent against the dollar over the next year, up from an 8 percent pace at the beginning of the year. For the GCC countries, there is speculation that some of these countries might decouple from the dollar. However, on a one-year-forward basis, market participants are currently building in only a couple of percentage points of expected appreciation.

Breakeven rates of inflation have continued to widen. As shown in exhibit 16, both the Board staff's and the Barclays measures have broken out above the ranges evident in recent years. It is difficult to differentiate how much this widening reflects a higher risk premium due to greater uncertainty about the inflation outlook versus higher expected inflation. But either way, it is probably fair to say that inflation expectations have become less well anchored over the intermeeting period. I will say, however, that yesterday breakeven rates of inflation came down very sharply—the move was 15 to 20 basis points. Today, we are back in the range we were in, but that is only today. Short-term rate expectations continue to move lower. As shown in exhibit 17, federal funds rate futures now anticipate a trough in yields a bit below 1.5 percent. The yields implied by Eurodollar futures prices have also shifted sharply lower, as shown in exhibit 18. The trough in yields is expected to be reached in late summer or early fall.

Our formal survey of primary dealers, which we normally show you, was conducted more than a week ago, and it is clearly out of date (these exhibits are included in the appendix to the handout). So let me focus on what the dealers' expectations were as of yesterday. They changed quite a bit over the past week. Most dealers expect either a cut of 75 or 100 basis points: There are eight for 100 basis points, ten for 75 basis points, and two for 50 basis points. This compares with the slightly more than 100 basis points built into the April federal funds rate contract (yesterday the April fed funds contract implied a 1.95 percent effective fed funds rate for the month).

There were no foreign operations during this period. I request a vote to ratify the operations conducted by the System Open Market Account since the January 30-31 FOMC meeting. Of course, I am very happy to take questions.

CHAIRMAN BERNANKE. Are there any questions for Bill? Vice Chairman.

VICE CHAIRMAN GEITHNER. May I say just one thing, Mr. Chairman? I want to point out that not only has Bill, along with a whole range of people in New York and on the Board staff, been working 24 hours a day for about five days, not only did he write a terrific statement for the FOMC just now, despite all of those other preoccupations, but he sat with his wife through major surgery on Thursday and Friday and with her as she recovered. Just a remarkable, terrific performance. I compliment him and just note that the burden he has been carrying is considerable even in comparison with the burden of so many others.

CHAIRMAN BERNANKE. We thank you. President Lacker.

MR. WARSH. You're still going to get questions apparently. [Laughter]

MR. LACKER. I hope your wife is doing well.

MR. DUDLEY. She is doing well, thanks.

MR. LACKER. First, just about breakevens. Breakevens came down a lot yesterday, but my understanding is the five-year, five-year forwards did not come down nearly as much. I think the figures I have are 3 basis points on the Board's measure and just 11 on New York's measure. Is that right?



MR. MADIGAN. Three is right on the Board's measure.

MR. DUDLEY. I don't have a number.

MR. LACKER. I am concerned about this late-day softening problem with the Primary Dealer Credit Facility. Everything else we have done has been fairly straightforward to sterilize, but because with this the quantity is activated late in the day, the funds are just going to flow into the market. You know, you're in the position of predicting something with a huge variance, the take-up on that. Now, this could unravel. If late-day softness becomes the norm, because of the arbitrage that's available to banks within the maintenance period for holding reserves, this could erode our ability to hold the target. Now, you people have been really creative about lending money, so I was wondering if maybe you could turn your creative talents toward this problem. The thing that comes to mind is some mechanism for sucking up funds at the end of the day on an automated basis. The natural thing would be for us to do sort of the opposite of repos late in the day for return the next morning. Have you given that some thought? Are you working on that?

MR. DUDLEY. We have given it some thought, but the press of other business, frankly, has overwhelmed us in the very short run. But I think it is a good point. I would say two things about the Primary Dealer Credit Facility and our ability to keep the funds rate at the target. One, if this works the way we hope it works, there are not going to be many people showing up at the Primary Dealer Credit Facility. We hope, over time, none—because if we reassure the repo investors that they can roll their repo, we think that will dominate coming to the Primary Dealer Credit Facility. So if this works out the way we imagine it could work, the Primary Dealer Credit Facility use will be very nominal, so we won't have this issue. The second thing I would say is that, if people do come to the Primary Dealer Credit Facility and that leads to softness in the federal funds rate, by definition it will make the Primary Dealer Credit Facility less attractive because,

remember, the Primary Dealer Credit Facility cost is tied to the target federal funds rate not to where the federal funds rate actually trades in the market. So that also will obviate some of that issue. But look, we haven't done this before. We have now had one day of experience. We're going to have to work on the issues that you raised, and we're going to have to see how it goes, frankly.

VICE CHAIRMAN GEITHNER. Mr. Chairman, could I just add one thing on this? I think the delicacy of the whole tri-party repo thing is hard to overstate. For better or worse, mostly for worse, the full tri-party repo market generally has spread over the last few years well beyond Fed-eligible securities, and until we get to the other side of this, there is a lot of risk in that stuff on repo that goes further out the eligible collateral quality spectrum. Even in a world where confidence comes back around the primary dealers as counterparties, the thing is there's just some natural risk that that stuff is going to have to be financed in some other form.

The hardest thing in this balance now is to try to do something that doesn't increase the incentives so that we become the counterparty to everybody. We're trying to make sure that it's a backstop, but not a backstop that's so attractive that they come, and that's going to be a very hard line to walk. I say that, Bill, because, just to lower expectations, the necessary cost of the choice we've made is that we're going to take the risk that we end up funding a bunch of stuff like that, and the commitment to do that is the only way this helps. It is very hard to know. Again, even if confidence holds, there is a reasonable probability that some of that stuff is just going to have to move into different forms and other hands, and that could be a delicate transition, particularly if people read into that a broader loss of confidence in this stuff.

The other thing that's important to point out is that it is just not realistic to expect, even with the force of the things that we announced on Sunday night, that we don't still have a wave of deleveraging ahead of us. There is still just a huge part of the world that knows they are really long

on risk in a fragile environment and have not yet gotten to that point. With everything that's happened in markets, their leverage is going up as the world goes against them, and they're going to want to keep bringing it down. That really is going to work against the effect of all the things we're doing. So just be prepared under the best of circumstances for a sustained period of substantial fragility. But to underscore your point, Jeff, we agree with your point and had been discussing in what we thought was a slightly calmer world over the past two weeks exactly that mix of things, and we'll be on it together and consulting.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. Yes, I just want to emphasize that what we have done so far has had this separability about it, and except for the brief period in late August last year, it has not threatened our ability to manage the federal funds rate in a way we thought appropriate for the whole economy. If we don't cure this problem soon, it will become visible; it will become well known; it will get priced in, and to some extent it will overtake this Committee's deliberations in the sense that it rather than our target rate will run the fed funds rate. I think that would be a fairly dangerous outcome, and it just strikes me that this is incredibly urgent.

CHAIRMAN BERNANKE. You make a good point, President Lacker. President Fisher.

MR. FISHER. More mundane questions, but by the way, Bill, thank you for your service. Everybody agrees with what the Vice Chairman said, and I hope you took note of it. Now that I've made you feel better, I have just a very simple question. On the TAF, has the portion of foreign participation gone down?

MR. DUDLEY. I don't think there has really been a shift. There's no meaningful shift.

MR. FISHER. So it's still pretty much where it was.

MR. DUDLEY. It's high. It will be interesting now with the reintroduction of the swap. You know, the ECB will essentially have a noncompetitive auction with us on this coming Monday. It will be interesting to see how that affects the TAF auction results.

MR. FISHER. Then the second question, Bill, which I raised on the phone. I don't remember an answer. Is it correct that German bunds have now traded through Treasuries in terms of default risk, and is that meaningful at all?

MR. DUDLEY. I think there was a day that that might have happened, but I don't really know the answer to that. I'm not sure what that really means.

MR. FISHER. That's my question. Does it mean anything?

MR. DUDLEY. If that were to happen, I'm not sure what I would make of it. That would probably reflect more what's going on between different countries in Europe than to have anything really to do with us versus Germany. That's how I would interpret it.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. President Rosengren.

MR. ROSENGREN. I'd like to commend the New York Fed staff for what I know has been a very difficult time over the past week. My question is almost the opposite of President Lacker's. He raises some interesting points, but I wonder. Given the stigma issues involved and what's just happened with Bear Stearns, you would think that borrowing at any kind of penalty rate for an investment bank, which arguably is more susceptible to runs than the typical commercial bank, is something that no one would take advantage of because of concerns about stigma. Is there any evidence that there's more stigma? How are the primary dealers viewing this, and have they raised concerns about confidentiality and what would be disclosed?

MR. DUDLEY. Yes, we have certainly gotten questions about how this will be disclosed. Now, there will be a disclosure. There will be a line item in the H.4.1 release, but it will just show the total dollar amounts extended through this facility. It is all bid through the New York District, so the total primary dealer borrowing will be shown in that release. The stigma issue is a legitimate issue, and that is why we have to be very careful about how we talk about this and take tremendous care not to disclose who or even what type of institution uses it. But at the end of the day, if you can't fund your repo and your only choice is to come to the PDCF, that is probably what you are going to do.

Now, to come back to Vice Chairman Geithner's point, I think that is exactly right, though. The fact that to the extent that there is stigma, they are not going to want to come, and that is going to reinforce the deleveraging process that is clearly under way, as is the fact that they just saw Bear Stearns go from a troubled but viable firm to a nonviable firm in three days. The lesson from that for a lot of firms is going to be, oh, I need more liquidity, I need to be less leveraged, and that lesson, from what happened to Bear Stearns, isn't going to go away.

CHAIRMAN BERNANKE. Governor Warsh.

MR. WARSH. I'm under the impression—Bill, you correct me—in the earnings call from the investment banks today and tomorrow, the four remaining are going to do all they can to destigmatize this facility with answers to the effect that “we haven't tapped the facility yet, but we would be very open to do it in the right circumstances” and to provide some comfort that it is not stigmatizing in their own minds. For the strongest of those firms to say that should provide some halo for the rest. But to Bill's point, I think we will have to evaluate that as we go.

CHAIRMAN BERNANKE. I think it is incumbent upon me to point out that the Board staff was also very involved, and I mention Brian Madigan, Pat Parkinson, Scott Alvarez,

Deborah Bailey, and others as well. So it was very much a joint effort. Other questions for Bill?

If not, we'll turn to Dave Stockton. Oh, I am sorry, we need a vote to ratify the open market operations.

MR. KOHN. I move that we ratify the open market operations.

MR. FISHER. Second.

CHAIRMAN BERNANKE. Without objection. Thank you. Now to Dave Stockton.

MR. STOCKTON. Thank you, Mr. Chairman. As you know, we have made some very large changes to the economic projection in this round—so large, in fact, that we had to adjust the scale on the forecast evolution charts that we put in the back of the Greenbook. Obviously, the most notable change has been our adoption of the view that the economy is moving into recession. I thought it would be helpful to briefly review this morning our reasons for making that call at this time. In addition, I will lay out the rationale for the depth and duration of the weakness in real activity that we are now projecting. Finally, I will explain why, with so much more projected slack in resource utilization, inflation has, on average, been revised up from our January projection.

We have noted on several occasions in the past few months that our decision to stick with a forecast in which the economy muddles through its current difficulties without falling into recession was a close call. Well, over the intermeeting period, we continued to accumulate a bleak array of economic indicators. Consumer confidence moved still lower and, in the case of the Reuters/Michigan measure, dropped to levels last registered in the early 1990s. Regional indexes of business sentiment continued to deteriorate noticeably, with steep drops in the measures reported for New York, Chicago, and Philadelphia. Although the weakness was less pronounced in the national ISM surveys, the composite indexes for both manufacturing and nonmanufacturing were below 50 in February. Small businesses—as reported in the survey conducted by the National Federation of Independent Businesses—and larger businesses—as captured by the Duke University Survey of Chief Financial Officers—have turned very pessimistic. These indicators taken alone, or even in limited combination, might not be that troubling. But when viewed as a whole and especially when taken in conjunction with the many financial indicators that have been flashing recession signals for some time, the pattern of recent readings is disturbing.

Furthermore, recession signals are no longer limited to surveys and financial indicators. Private payroll employment is estimated to have dropped 101,000 in February, and there were sizable downward revisions to earlier months that left employment showing declines in both December and January. Industrial production dropped 0.5 percent in February, and manufacturing IP fell 0.2 percent. The weakness in industrial production occurred not only in the series in which we use

production worker hours to estimate output but also in series where we have measures of physical product. For both payroll employment and industrial production, diffusion indexes indicate that the weakness has been spread widely across industries. This morning's data on housing starts also suggest little end in sight to the ongoing recession in housing. Single-family starts fell more than 6½ percent, to 707,000 units, in February, and permits dropped a similar amount. Both figures were very close to our expectations. Multifamily starts moved up to 360,000 units, but that figure follows some low figures late last year, and we wouldn't attach much signal to that reading. Moreover, while I certainly am not going to try to predict what the NBER will ultimately do, a number of the series consulted by the dating committee appear to have peaked late last year or early this year—at least on the currently published data. Real personal income, industrial production, payroll employment, and real manufacturing and trade sales all have local peaks sometime between October and January. All told, the evidence of a serious weakening of the economy appears to us more palpable now than it did in January.

If one grants that the economy, from time to time, exhibits nonlinear behavior, then our forecast will need nonlinear changes to avoid making outsized errors. At this point, we've seen enough to make us think that recession is now more likely than a period of weak growth, and that is what we are forecasting. But having made that discontinuous change to our projection, I want to impress upon the Committee just how much this remains a *forecast* of recession; a lot has to happen that we haven't seen yet to be confident of this call.

Indeed, there are several reasons to be skeptical that we *have* transitioned into recession. One striking feature of several surveys of business sentiment is that businesses appear more pessimistic about the overall economic picture than they do about the prospects for their own firms. Another cautionary reading comes from the motor vehicle sector. Sales have softened noticeably over the past couple of months, but they haven't tumbled as they might have if the economy had already moved into recession. In labor markets, initial claims for unemployment insurance, which had risen earlier in the year, have leveled off of late, with the four-week average running about 360,000 in recent weeks. That level of claims is not yet high enough to clearly signal the declines in private payrolls of between 150,000 and 175,000 that we expect will be occurring this spring. Finally, orders and shipments for nondefense capital goods flattened out late last year but as yet have not shown any signs of serious deterioration, which will be necessary shortly if our projected downturn in capital spending is to come to pass. For now, we are willing to treat these readings as suggesting that there is some upside risk to our forecast of a modest recession.

One of the key features of past recessions, as viewed through the lens of our models, is a tendency to observe large negative residuals that are correlated across the major spending equations. We have built that feature into this projection. But this also remains a forecast because a pattern of correlated negative residuals is not yet clearly evident in the data. To gain some perspective on how the forecast would have looked had we not built in these recession effects, we showed an alternative scenario

in the Greenbook that effectively removed these residuals. The result is a forecast that is similar to, though in the near term a bit weaker than, the one we showed in the January Greenbook largely because of higher oil prices and weaker housing prices. But we have marked down the baseline forecast considerably more than would be suggested by these factors alone.

To be sure, we may have overreacted by moving to a recession call. But that possibility is counterbalanced by some clear downside risks even relative to this more pessimistic forecast. The recession that we are forecasting is relatively shallow. In our forecast, the depth of the downturn is limited in the near term by tax rebates, which provide a substantial boost to disposable income starting in May. This should help to buffer some of the drag on spending that is anticipated to result from declining employment, higher oil prices, and weaker household net worth. Moreover, domestic production benefits appreciably from the past and prospective decline in the exchange value of the dollar and the continued growth in the economies of our major trading partners—factors that help to provide a sizable boost to net exports this year and next. These influences result in a small upturn in real GDP in the second half, and the unemployment rate rises only 1¼ percentage points, to 5¾ percent. That is a small increase in unemployment even by the standards of the past two mild recessions. As I've noted, well-timed macro policies and substantial support from the external sector lead us to expect that this time will be different and that the unemployment rate will rise less than usual. But you should always be wary of forecasts that expect this time to be different.

Another notable feature of our forecast is that, although the projected downturn in activity is shallow, the period of weak aggregate demand is lengthy, especially given the assumed low level of the real funds rate. For those of you so inclined, this might be a good time to check your Blackberries for e-mail or to get in a couple of games of BrickBreaker because I can assure you that I will not be offering much in the way of scientific insight on this issue. In our forecast, the growth of real GDP picks up next year for several reasons. Housing demand finally bottoms out, and accordingly, construction activity begins to arrest its steep decline. In addition, given our forecast of a flattening of crude prices, the drag from higher oil prices on consumer spending is expected to wane next year. Importantly, we also assume that there will be a gradual lifting of the restraint on spending as financial stress abates. The last influence is now assumed to lift more gradually than in our previous forecast and, along with an intensifying drag from lower house prices, accounts for much of the lingering weakness in this projection. Correspondingly, the unemployment rate falls to only 5½ percent at the end of 2009. In our previous forecast, we had the effects of financial stress fading over this year, on the thought that, as it became apparent that the economy would avoid recession and that housing was bottoming out, risk spreads would narrow, credit conditions would loosen up, and spending restraint would ease. Obviously, in our current forecast, the economy experiences recession this year, and housing doesn't show much sign of stabilizing until next year. As a consequence, we don't begin to phase out the unusual restraint on spending resulting from financial stress until next year.



This aspect of our forecast, even more than others, is largely guesswork. We just don't have much in the way of historical experience on which to calibrate the projection. In recognition of that uncertainty, we included in the Greenbook two alternative simulations. In the "faster recovery" alt sim, we assume a stabilization of housing later this year and a reversal of most risk spreads by the middle of next year. Under these assumptions, growth picks up more noticeably, and a tightening of monetary policy is required next year. Alternatively, one cannot rule out some further deterioration in financial conditions and an even longer period of subpar economic performance. In the "greater housing correction with more financial fallout" scenario, a steeper decline in home prices results in a deeper contraction in construction activity, a further widening of risk spreads, tighter lending conditions, and an additional deterioration in household and business sentiment. Although this scenario might sound extreme, it only pushes the outer edge of the 70 percent confidence interval for real GDP and unemployment. It is also sobering to recognize that this simulation results in a nominal funds rate path that skirts the zero bound. The bottom line: We know with probability 1 that the baseline forecast will be wrong. But with the downward adjustments that we have made to this forecast, we feel that there is significant probability mass on both sides of our projection.

Despite marking down our forecast of real activity substantially this round, our projection of consumer price inflation, both headline and core, has been revised up in 2008 and is largely unchanged in 2009. Those revisions reflect marginally worse news on the incoming price data as well as further deterioration in some of the key determinants of price inflation. As for the news, our reading of the recent price figures is that core PCE prices probably did not rise as rapidly in January as is currently published but that they likely rose faster in February than might be suggested by a cursory examination of last Friday's CPI report. As we noted in the Greenbook, barring offsetting influences, we believe that the currently reported increase in core PCE prices of 0.3 percent in January will be revised down to 0.2 percent after the BEA incorporates the low reading on medical care services that was shown in the January PPI. As for February, the core CPI being unchanged was a favorable development. But a sizable fraction of the good news was in rents and medical care; rents receive a much smaller weight in PCE prices than in the CPI and, as I just noted, the PCE price index uses the PPI, not the CPI, for measuring medical costs. Incorporating medical care prices from this morning's PPI release suggests to us that core PCE prices rose about 0.15 in February. All told, we are projecting an increase in core PCE prices of 2.5 percent at an annual rate in the first quarter, 0.1 percentage point more than in January.

We have also incorporated into this forecast a further jump in the cost of crude oil and higher import prices associated with the weaker dollar and more-rapid gains in commodity prices. Moreover, we have read the survey measures and TIPS spreads as suggesting that there may have been some deterioration in inflation expectations of late. Taken together, these less favorable developments more than offset the projected emergence of some slack in resource utilization. As a consequence, we are

now projecting core PCE prices to rise 2.3 percent this year, up  $\frac{1}{4}$  percentage point from our January projection. Despite an unemployment rate that runs nearly  $\frac{1}{2}$  percentage point above our previous forecast, we have left unrevised our projection of core PCE prices in 2009 at 1.9 percent. Higher food and energy prices have resulted in a further upward revision to total PCE price inflation of nearly  $\frac{3}{4}$  percentage point, to 2.9 percent, in 2008. Total PCE price inflation for 2009 is unrevised at 1.7 percent.

Before turning the floor over to Nathan, I want to let the Committee know that the three research divisions are undertaking a review of the structure of our policy documents. The Greenbook and Bluebook have grown in length and complexity over the past decade. Our objective in this review will be to improve the focus and flow of the documents and to eliminate the redundancy that has crept in over time so as to reduce the burden on you in reading the documents and the burden on the staff of producing them. We will, of course, consult with the Committee before implementing any substantive changes. Nathan will now continue our presentation.

MR. SHEETS. The global economy has likewise seen some extraordinary developments during the intermeeting period. Notably, the spot price of WTI has surged more than 15 percent, briefly reaching \$110 per barrel, and many nonfuel commodities prices have moved up by similar magnitudes. The exchange value of the dollar, which had been relatively stable since November, has returned to a depreciating path, falling more than 5 percent against the major currencies since mid-February and reaching a post-Bretton Woods low. The global financial stresses that began last summer have further intensified. Also, as Dave has outlined, recent data suggest that the U.S. economy has continued to weaken. Nevertheless, not all the news from the foreign sector has been grim. Indeed, given the shocks that have materialized, the foreign economies appear to be showing somewhat more resilience than we would have expected.

Total foreign real GDP growth in the fourth quarter of last year stepped down to 3.2 percent from the rapid 4.5 percent rate that had prevailed through the previous three quarters, as the pace of activity slowed in both the advanced economies and the emerging market economies. This fourth-quarter out-turn, however, was about  $\frac{1}{2}$  percentage point stronger than we had expected, reflecting an upside surprise in the emerging markets. Available indicators of first-quarter activity paint a mixed picture. In the euro area, economic sentiment fell in February for the ninth consecutive month, but the purchasing managers index for the services sector and the German IFO index of business conditions picked up. In addition, industrial production and retail sales posted stronger readings in January. The ECB's bank-lending survey indicates a tightening of lending standards, but measures of bank credit to the corporate sector have continued to expand. Indicators of activity in the United Kingdom have also been mixed. Consumer confidence in February slid to a five-year low, but business confidence and conditions in the services sector have been more upbeat. In emerging Asia, while the impetus from external demand is clearly diminishing, Chinese retail sales have continued to grow robustly; industrial production in Korea, Singapore, and

Taiwan moved up in January; and domestic consumption in the ASEAN countries has remained solid. Taken together, these data seem to indicate that growth abroad has cooled but has not stalled.

Our forecast thus seeks to balance several offsetting considerations. On the one hand, the projection for U.S. growth this year has been cut by a sizable 1½ percentage points; this has particularly stark implications for countries like Canada, Mexico, and some in emerging Asia that have close trade ties with the United States. The further deterioration in global financial conditions should also weigh on activity abroad. On the other hand, the incoming data suggest that the foreign economies are not yet following the United States into recession, and the red-hot commodities markets also lead us to believe that activity is holding up in some corners of the world.

Weighing these factors, we have cut our forecast for total foreign growth in 2008 to 2.3 percent, down from 2.9 percent in the last Greenbook, with much of this markdown reflecting softer growth in Canada and Mexico. Our projections for emerging Asia have also been reduced, but we see these economies still expanding at a moderate pace. Clearly, there are both upside and downside risks around this forecast. On the downside, the adverse spillovers from the U.S. slowdown and continued financial stresses may be more severe and more broadly felt than we envision. On the upside, the apparent resilience in foreign demand to date suggests the possibility that growth abroad may hold up better than we now expect. In 2009, foreign growth is projected to rebound to 3½ percent, in line with the expected easing of global financial stresses and economic recovery in the United States.

With commodities prices increasing sharply, foreign inflation has continued to rise. Notably, in the euro area, 12-month headline consumer price inflation climbed to 3.3 percent in February, well above the ECB's 2 percent ceiling, driven up by food and energy prices. In China, 12-month inflation in February surged to 8.7 percent, at least in part reflecting sharp increases in food prices due to severe winter weather. In an effort to temper these pressures, the Chinese authorities have introduced temporary price controls for some basic necessities and this morning announced plans to raise reserve requirements another 50 basis points. We now see average foreign inflation in 2008 as coming in at around 3¼ percent, up ¾ percentage point from the last Greenbook.

Central banks have responded to this cocktail of slowing growth and higher-than-desired inflation in divergent ways. To date, the ECB has held its policy rate firm at 4 percent, citing the level of headline inflation, possible second-round effects from commodity price increases, and risks from ongoing wage negotiations. Given these concerns, we now expect the ECB to remain on hold a while longer but, in response to a projected further slowing of activity, to cut rates 50 basis points later this year. The Bank of England, in contrast, has reduced its policy rate 50 basis points since the fall—and we expect another 75 basis points by year-end—in an effort to cushion the economy against financial headwinds and slowing in the housing and commercial real estate sectors. Finally, the Bank of Canada has reduced rates

100 basis points since the autumn, in response to downdrafts from the United States and the strong Canadian dollar, and the Bank has indicated that “further monetary stimulus is likely to be required.” Thus we see another 50 basis points of easing in the second quarter.

As noted earlier, the dollar has depreciated more than 5 percent against the major currencies since mid-February as the widening divergence between the path of policy rates in the United States and other industrial countries, particularly the euro area, has weighed on the dollar. As a related factor, the tone of the recent U.S. economic data has been much softer than for most other advanced economies. In broad real terms, the path of the dollar in our current forecast is about 2½ percent weaker than in the January Greenbook. Going forward, our forecast calls for the broad real dollar to decline at a 3 percent annual rate, with this depreciation expected to come disproportionately against the currencies of the emerging market economies.

I conclude with a few words regarding the performance of the U.S. external sector. The January trade data showed exports continuing to rise at a healthy pace while nonpetroleum imports contracted. Imports of consumer goods were particularly soft. For 2008 as whole, we now expect the external sector to contribute a substantial 1.2 percentage points to growth, about twice as much as in our previous forecast. To be sure, much of this larger arithmetic contribution from net exports reflects a contraction in imports caused by the slowdown in U.S. demand. However, part of the reduction in imports is also due to the decline in the dollar. Exports this year are seen to grow at a pace of nearly 7 percent, just a touch less than in the last Greenbook, as the effects of the weaker dollar almost offset the markdown in foreign growth. In 2009, imports rebound as the U.S. economy recovers, and the positive contribution from net exports accordingly shrinks to about ½ percentage point. Finally, yesterday the BEA reported that the current account deficit narrowed to 4.9 percent of GDP in the fourth quarter, its smallest share of GDP since 2004. We had expected the rise in oil prices to drive up the deficit, but this was more than offset by a marked improvement in net investment income, partly as earnings received by foreigners on their investments in the U.S. financial sector declined, reflecting the effects of the ongoing financial turmoil. We will now be happy to take your questions.

CHAIRMAN BERNANKE. Thank you. Questions? President Fisher.

MR. FISHER. If I put the two comments together, one of the messages I receive is that we are less confident in the linkage between U.S. slowing growth and rest-of-world slowing growth than we or conventional wisdom was before. You mentioned, in the discussion of the international side, the downside and upside on growth. There is also a downside and an upside on inflation. I just want to ask about our thoughts on this from a staff standpoint. Clearly, the

downside price pressures come from our housing crisis and all of the other related issues and, I presume, from the building of slack and rising unemployment and, therefore, restrained wage demands. That is the domestic side. At the same time, I think I hear you saying that on the global side it is not happening in that fashion elsewhere. The emerging countries, particularly China, are still growing at a rapid pace. However, it may become somewhat slower. My question is, Do we feel that there is as much an offset to our domestic disinflationary/deflationary forces as we thought before? Are these global demand-pull inflationary forces basically mitigating our expectations of the contractionary domestic forces? How has your opinion—the two of you—changed in the intermeeting period? I hope that is a clear question, but I think you get the point that I am making.

MR. SHEETS. Over the intermeeting period we have lived through an experience that manifests the upside risk to our inflation forecast; and I would indicate that, with the  $\frac{3}{4}$  percentage point markup to headline foreign inflation in 2008 in our forecast, the vast majority of that is a reflection of these red-hot commodity markets, which then presses the question to us, Well, what is going on there? Certainly, in the case of the demand in these markets, by now I would have expected to have seen some attenuation or a bit of softening. Really, it seems to be quite the opposite. The demand since the first of the year has accelerated. Some other factors are at work as well—idiosyncratic supply stories, electrical outages that made it harder to smelt aluminum and copper, and so on. So there are some supply factors as well. The demand side seems to be important, and to the extent that demand remains strong, I am not sure where these commodity prices are going to top out. The futures path is a reasonable guess at sort of the balance of supply and demand. There is also some upward pressure on these prices from the

depreciation of the dollar. But to the extent that commodity prices move up, I would say that we will probably be marking up our forecast of foreign inflation next time.

Just a broader comment on the linkages between the U.S. and the foreign economies—again, I was surprised at the strength of demand in these commodity markets. I would have expected by this point to have seen more marked evidence of slowing in the foreign economies. So we have marked down our forecast for 2008 in line with these prospective developments, the further slowing in the United States, and the financial stresses. But we didn't mark down our forecast very much, just a tenth or two, and mainly in Canada in Q1; and the data that we have in hand are not pointing to a dramatic slowing. We are expecting more of that to come through in the second and the third quarters.

MR. STOCKTON. President Fisher, I will just basically reiterate what I said earlier and amplify many of the same things that Nathan just said in terms of the influences on our headline forecast. We revised up  $\frac{3}{4}$  percentage point as well, and that really is coming from higher energy prices, higher food prices, and higher commodity prices, all of which we think are already showing through to some extent and we expect to continue to show through to headline inflation. Despite the fact that we run with a much larger output gap in this forecast, we haven't revised down our forecast for 2009 because of the lingering effects of the run-up in commodity prices that we are expecting. As I indicated, we think there has probably been some small deterioration in inflation expectations as well.

MR. FISHER. Thank you very much. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Evans.

MR. EVANS. Dave, my question is basically about the influence of the financial stress on the outlook. I was talking to an official at the Bank of Canada last week, and she had an

intriguing calibration by which she said that, since last August, they thought that financial stress for Canada was worth about 25 basis points of restraint at the outset and now they thought it was more like 50 basis points for their economy, which is doing quite well. I guess the impossible question is, Have you thought about that type of calculation and how it influences the way we think about interest rates for your forecast? The way that I am thinking about this and that President Lacker and others have thought about this is that we are trying to separate the effects of standard monetary policy and of the innovative policies. Any separation that affects financial markets directly helps us think about the more normal calibration of policy. But, of course, with financial stress we have these add-on effects. So that is why I think that would be interesting.

MR. STOCKTON. We have thought about that, and the difficulty at this point is trying to identify the truly exogenous features of the current financial stress that is operating over and beyond the channels that are normally incorporated in our models. Our models, obviously, have asset prices, such as house prices and stock prices, and have interest rates and interest rate spreads, and as those things have changed, we have been able to incorporate them into our forecast. But then, over and above that, we think that the model doesn't really capture a lot of the credit-availability channels. There is a lot more stress in the market beyond that captured by the interest rates in our models. So taking this with more than a grain of salt, we think roughly  $\frac{3}{4}$  percentage point on the level of GDP this year—over and beyond the effects of lower house prices, the weaker stock market, and the higher interest rate spreads—that basically lingers on into next year and only then begins to gradually phase out. That is an important factor as to why this forecast is based on such a low real federal funds rate. Obviously, if you came to a different conclusion either about the depth of what is likely to be occurring in the next few months in terms of the restraint—not just from these financial stress conditions but also from our call that

we are moving into a recession—or about the way that restraint fades out over the forecast, that would have a huge influence on the projected path for the funds rate. So it is important to recognize that this forecast is conditioned on one in which those effects linger quite significantly into next year.

MR. EVANS. Thank you.

CHAIRMAN BERNANKE. Other questions? If not, we will begin our economic go-round. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. I thought I would talk a bit about some events in our region that I think have global implications—that is to say, I will talk a bit about agriculture. You have heard others here this morning talk about some of the price movements, and I think it is worth perhaps spending a few minutes on their effects. First of all, agricultural commodity prices have surged to record highs, driven by obviously strong demand, lean supplies, and a weak dollar. Since the fall of 2007, winter wheat prices have doubled, and corn and soybean prices have risen about 70 percent, to record highs. Rising crop prices are boosting farm income. In real terms, U.S. net farm income is expected to climb to the second highest level on record, trailing only 1972, when abrupt sales of U.S. wheat to Russia pushed up farm income.

An emerging concern is the growing disarray in futures markets for agricultural commodities caused by a surge in investment by index and hedge funds going forward. Recent reports indicate that hedge and index fund investment in futures markets for corn, soybeans, and wheat rose from \$10 billion in January 2006 to \$45 billion this past January. Early this month, index funds held more than 40 percent of the long positions on wheat contracts on the Chicago Board of Trade. At this rapid pace of investment—since the beginning of this year averaging



\$1 billion per week—the funds would own the nation's entire 2008 corn, wheat, and soybean crops by early 2009. Now, that is obviously theoretical, but that is how much money is going into this market. The resulting market disarray is constraining the traditional use of commodity futures to hedge market risk. Grain elevators, which use futures to hedge their contracts to purchase crops from producers for future delivery, are facing much larger than normal margin calls on their futures positions. Some reports indicate that lenders are beginning to restrict their funding of elevator hedges. As a result, an increasing number of elevators are limiting their contracts for crop purchases to no more than sixty days in advance of the delivery instead of the normal one to two years.

Now, this surge in crop prices and farm income is pushing up farmland values. According to our bank's agricultural credit survey in the fourth quarter of 2007, non-irrigated cropland values jumped 20 percent over 2006 levels, with strong gains also reported in irrigated cropland and rangeland. Our directors and other contacts report a further strong gain since the beginning of the year, and some have reported as much as a 20 percent increase in the first quarter alone. Adjusted for inflation, the average price of farmland across the nation now tops the early 1980s peak, which immediately preceded the plunge in the early to mid 1980s.

To date, crop production budgets suggest that the recent run-up in farmland values is supported by current revenues from crop production. However, farm input costs have also risen sharply, driven by higher energy costs, suggesting that a drop in crop prices could quickly erode farm cash flow and undermine these values. District bankers report a surge in farm capital spending. In February, sales of four-wheeled major equipment rose 45 percent above 2007 levels, and combine harvester sales were up 13 percent. Farm equipment prices have risen sharply, and our directors and other contacts report that some equipment dealers are rationing

purchases among their customers. In the past month, anecdotal reports from District contacts indicate that nonfarm investors have boosted their farmland purchases. Our contacts at a national farm management company based in Omaha stated that the number of inquiries for farmland purchases by corporate interests has jumped significantly recently. Similarly, one of our directors reported that a hedge fund with assets of more than \$7 billion is expected to invest \$500 million in cropland from Texas and Nebraska. This fund recently purchased nearly 25 square miles of corn acreage in western Nebraska.

Now, we continue to watch for signs of rising leverage, but to date farm debt levels have risen modestly only, and agricultural banks seem to remain healthy. Bankers report continued use of cash to finance farmland purchases, but I would note that leverage is being brought into the picture, and I think that will accelerate as opportunism and greed have their way. Total farm lending in the District banks has increased a modest 14 percent over the past four years, with most of that growth being in farm real estate lending. But District bank examiners and respondents to our surveys reported that the Farm Credit System was being more aggressive in funding farm real estate transactions. Real estate mortgage loans held by the Farm Credit System rose about 12 percent in 2007. Asset quality at our ag banks remains, at this point, solid. Noncurrent assets—all assets, not just farm loans—at ag banks are up only slightly from a year ago and remain well below historical averages. Net loan losses are still very low. Earnings have remained solid primarily because of cost control and very low loss provisions. I am very pleased, but I will tell you that, going forward, in terms of the surveys with the kinds of pressure and price appreciation going on, I think the push for leverage is just beginning.

At the national level, in terms of the Greenbook, every indication is that the economy is slowing. Whether it is recession or very slow growth is a matter of degree, but I think our projections are in the same direction as the Greenbook.

Turning to the inflation outlook, I am concerned, as I have said before, about the upside risk to inflation. Though I certainly agree with others around the table that weaker economic activity may put some downward pressure on goods price inflation, I think we can also agree that a number of factors could push inflation higher, including rapidly rising commodity prices worldwide and a weaker dollar. As discussed in the Bluebook, there is some indication that inflation expectations may be moving higher as well. As I have indicated before, I am increasingly concerned that, in our need to respond to signs of economic weakness, we risk losing our hard-won credibility on inflation. For the past four years, core PCE inflation has averaged about 2.1 percent, considerably above the numbers that this Committee has put forward in its long-term projections. Frankly, I do not think that many people outside this room think that this Committee can deliver the longer-run projections that we have put forward. I don't think that we can keep inflation expectations anchored only by talk if actual inflation rises further in the months ahead and we continue to ease policy in a rising inflationary environment. This is something that we need to keep in mind as we discuss our policy options today. Thank you.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. Since our last meeting, the economic data have continued to indicate a very weak economy and that, in all likelihood, we have entered a recession. Like the Greenbook, my outlook is particularly influenced by indications of significantly weaker labor markets and a housing market that is as yet showing no signs of

reaching bottom. Private payroll employment fell 101,000 in February, and the sum of the downward revisions in December and January was about the same magnitude. Not only have we had three months of declining private payroll employment, but also the decline has been widespread across most industries. The Blue Chip economic forecast, the Greenbook forecast, and our own forecast have the unemployment rate peaking somewhere between 5½ and 6 percent. While most analysts are in the process of downgrading their forecasts from skirting to actually having a mild recession, the risk of a more severe downturn is uncomfortably high.

A major determinant of the severity of a downturn will be the housing market. Because recent developments in the housing market are so different from most postwar history, I remain very concerned that the effects of substantial declines in housing prices will be difficult to capture in statistical models based on historical data. The Case-Shiller index indicates that housing prices fell approximately 10 percent in 2007, and a decline of similar magnitude this year would mean that many homes purchased in the past several years are in a negative equity position. Elevated foreclosures and large inventories of unsold properties are providing abundant opportunities to purchase homes at heavily discounted prices financed at low interest rates by historical standards. But widespread concerns that prices will continue to fall have resulted in many prospective buyers deferring purchase decisions. To date, the housing market has been quite weak, despite relatively low unemployment rates. But if our forecasts are right, job losses this year are likely to exert a significant further drag on housing prices as rising unemployment rates force additional home sales or foreclosures. Falling housing prices are likely to have a collateral impact on consumption. Perhaps reflecting this risk, the credit default swap rates on retailers have been rising, and we are increasingly hearing of retailers that are closing stores or postponing expansions. Retailers, like consumers, are aware that high oil

prices, increasing job losses, and losses of wealth in the stock and housing markets are not likely to be conducive to robust consumption.

Exacerbating the negative economic news is the continued deterioration in financial markets. Credit spreads have widened significantly over the past six weeks, with many spreads more than 50 basis points higher than at the last meeting. Hedge fund and money managers that I talk to are acutely aware of the counterparty risk and are very carefully managing their collateral. Most firms with excess collateral are in the process of managing that position down. The deleveraging that is going on has reduced the willingness of banks and other financial intermediaries to finance their positions. In addition, as concerns with liquidity rise, we are once again seeing renewed pressure on the asset-backed commercial paper market. The rise in credit default swaps for companies like Washington Mutual and Lehman Brothers indicates increased concerns for the solvency of other large financial institutions with large exposures to mortgages. The potential for a further episode of financial market dysfunction and for runs on additional financial firms is significant. My primary concern at this time is that we could suffer a severe recession. Falling collateral values and impaired financial institutions can significantly exacerbate economic downturns.

Some indicators of inflation are higher than we want, but during previous recessions, commodity prices and inflation rates fell. Given my forecast for the economic outlook, I expect substantial excess capacity to significantly reduce inflationary pressures going forward, and I see little evidence that higher commodity prices are causing upward pressures on wages and salaries.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. Since we met at the end of January, there has been an utter dearth of good news concerning both the real and the financial sides of the

economy. On the real side, I just can't recall any intermeeting period in which nearly every single data point was dismal. On the financial side, there have been occasional good days, but the net changes over the intermeeting period have been negative across the board in both the equity and the credit markets, so financial conditions have unambiguously tightened. These developments are familiar to all of us, and I won't take up time to review the specifics.

My overall sense at this point is that the effects of the severe and prolonged housing downturn, the financial market implosion, and the price increases for oil and other commodities have now spread to most corners of the economy, including the major segments of consumption and business fixed investment. Exports represent about the only source of strength, and while that is welcome, I must say that the economy is pretty clearly in trouble when the contribution to real GDP growth from exports exceeds overall real GDP growth, as may well happen this year. The bottom line is that, like nearly everyone else, I have downgraded my economic outlook substantially. Assuming that the stance of policy is eased substantially at this meeting and additionally by midyear, I see the economy as essentially in recession during the first half before picking up somewhat in the second because of the effects of monetary and fiscal policy.

However, I certainly see large downside risks to my forecast, and I think the Greenbook's view that recessionary nonlinearities have already set in seems to me to be within a reasonable range of outcomes. In fact, we have also been looking at monthly data on coincident business cycle indicators, and that examination suggests to us that the NBER may well date the beginning of the recession to last November.

The prospect of this outcome has been made more palpable for me by the rather sudden increase in the frequency and intensity of pretty dire comments I am hearing from my contacts. First, I have heard widespread reports of reductions in capital spending plans due to caution or

pessimism regarding economic growth. For example, a large manufacturer and retailer of outdoor sports equipment reported that technology and infrastructure spending has been cut by at least a third in 2008. In another example, a large player in commercial real estate in the San Francisco Bay area described how projects are being canceled because the financing spigot has been shut. Indeed, nonresidential construction is one sector where I think the Greenbook may be too optimistic. I envision growing weakness there.

Second, my retail contacts suggest that spending has softened further in the wake of a weak holiday season, and expectations are for continued weakness at least through spring. For example, the CEO of a large high-end national retail operation reports that for January and February he has seen declines in sales that haven't been experienced for almost fifteen years. These declines have created tremendous pressure on inventory levels requiring large markdowns with negative effects on profits. Vendors are reeling from the cancellation of orders, the return of goods, and sharp reductions in new orders.

Third, a number of contacts have provided comments reinforcing the view that a significant credit crunch is under way. Slightly more than half of the comments received on this topic indicate that credit standards have tightened significantly in recent months. In one example, the CEO of a bank in my District reports that several of the nation's largest mortgage lenders have suspended withdrawals from open home equity lines out of concern that borrowers could now owe more than their homes are worth. As a final anecdote, a banker in my District who lends to wineries noted that high-end boutique producers face a distinctly softening market for their products, although sales of cheap wine are soaring. [Laughter]

Now let me turn to inflation and inflation expectations. Of course, much of the recent data have been disappointing, having been pushed up by rising energy and other commodity

prices. Though I was heartened by Friday's CPI report, this one observation hasn't changed my overall impression that prospects for core inflation this year have worsened a bit since we met in January, and I have raised my projection for core PCE inflation about  $\frac{1}{4}$  percent in 2008, to  $2\frac{1}{4}$  percent. These data raise the issue of whether cutting rates as much as needed to fight a recession may risk persistently higher inflation and inflation expectations. But I tend to think this risk is manageable.

First, as I have said before, I view inflation as less persistent now than it once was, tending to revert fairly quickly to its longer-run trend. We have recently reviewed and updated our econometric evidence for this and found it to be even more convincing now than it was a couple of years ago. Of course, it is important to remember that the current lack of persistence presumably is due to our enhanced credibility, so we do have to be careful to maintain it. Recent increases in inflation compensation in Treasury markets highlight the risk that our attempts to deal with problems in the real economy possibly could lead to higher inflation expectations and an erosion of our inflation credibility. But inflation compensation is just one indicator of inflation expectations. I very much like the Board staff's approach, which is in the current Bluebook, of combining the information from a wide variety of indicators into a principal-component-type model. I found it reassuring that the resulting index of inflation expectations and uncertainty is still within the range of variation that we have seen over the past decade or so.

Second, I tend to think that developments in labor compensation are an important part of the transmission process for monetary policy to inflation. Before we get into too much trouble with inflation and inflation expectations, I would expect to see labor compensation begin to rise more rapidly. I find it reassuring that both our broad measures of compensation have expanded



quite moderately over the past year, and productivity growth has been fairly robust. So after incorporating its effects, unit labor costs are up less than 1 percent over the past four quarters.

Finally, the more pronounced slowdown that I expect for economic activity is likely to put somewhat greater downward pressure on inflation going forward. Overall, I expect core PCE inflation to fall below 2 percent next year under an assumed leveling out of energy and other commodity prices and the projected weakening of labor and product markets.

CHAIRMAN BERNANKE. Thank you. President Stern.

MR. STERN. Thank you, Mr. Chairman. Well, the baseline forecast in the Greenbook looked to me a lot like the 2001 recession experience—very brief and very mild. If things turn out that way, we will have been very fortunate, frankly. The forecast I submitted at the last meeting was lower than most around the table, and now my bottom line is that I think the recession that, if we are not in, we are confronting is more likely to resemble that of 1990-91, which, while brief, wasn't that mild. There were a couple of quarters, as I recall, where the economy contracted by at least 3 percent in real terms. I am not sure that this recession is likely to be as brief as the previous two either. I have tried to use the 1990-91 experience and its aftermath as sort of a guide to thinking about where we are today and how things might unfold and evolve because there are some significant similarities as well as some significant differences between the periods. But it is also a way for me to start to organize things and think about this. So let me just describe a few of what I think are relevant features from that experience and how today's circumstances are either similar or different.

If you compare our circumstances today with what we were confronting back in 1991, on the positive side inflation and inflation expectations are both lower today. The unemployment rate is lower than it was going into that recession. Nominal and real interest rates appear to be

lower today than they were back then. I think that nonfinancial business balance sheets are in better shape today on average than they were going into the 1990-91 experience, and depository institutions overall are in better shape today than they were back then, although of course they are having some very high profile problems. Of course, that was the period when we saw more or less the virtual demise of the thrift industry and problems of major banks. There was also a significant correction in housing activity, which commenced in 1987 and ran through into 1990. It wasn't as sharp as the one we are experiencing, but it was significant nevertheless. There was also a credit crunch back then, and that was given a lot of responsibility not only for the recession but for its aftermath—that is, the relatively sluggish recovery that occurred once the recession ended—because it was alleged that financial institutions, nonfinancial businesses, and households were all trying to strengthen their balance sheets simultaneously, and so there was a good deal of caution throughout the financial sector. So there are a number of similarities as well as a number of differences.

When I think about today's circumstances, a couple of things come to mind. One is, as President Yellen summarized, that the breadth of negative news about the economy is striking to me. On top of that, I think today's financial problems are, without question, more severe and more intense than they were back then. They have engulfed many financial markets, as we are well aware. While there were declines in housing prices and housing values in some markets back then, the decline we are experiencing today is both more widespread and is likely, before it is done, to be a good deal deeper. So I think that at least a reasonable parallel is the kind of thing we experienced back in 1990-91.

Now, on the inflation side, let me start with policy. We weren't targeting the federal funds rate back then. We were still wedded to the monetary aggregates, more or less. But the

funds rate, nevertheless, provides some useful information. The funds rate, in early 1989, was around 9¾ percent. It got to 3 percent by September 1992, where it stayed until early 1994. I cite that because inflation, whether you look at core or at headline, actually diminished through that period. So while some people have been worried, and perhaps justifiably, that this is going to shape up like the late 1960s or much of the 1970s as far as inflation is concerned, all I would say about that is it is not a foregone conclusion if you look at history. I don't know that it is easy to distinguish how this is likely to play out, but that was a very significant series of policy moves undertaken back then, and inflation, nevertheless, diminished.

The only other comment I would add to this—and it is not going to lift the gloom right away, certainly—is that these financial problems are going to persist. Even if they bottom out and conditions start to improve, I would expect that they will exert headwinds on the shape of the recovery. My view is that 2009 is not likely to be as healthy as the Greenbook envisions, largely as a consequence of the hangover of financial problems. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. Reports from my directors and business contacts are consistent with what others have said this morning—that overall economic growth has slowed appreciably since the beginning of the year. Pessimism about the near-term outlook has increased. At the same time, many are troubled by the continued elevation of prices and price level increases and are apparently becoming less convinced that inflation will moderate any time soon. In my view, the deliberations this morning and the decision we make must be about, first, financial system stability—the threat to the broad economy of severe financial instability—and, second, inflation risk and the role of rate policy in response to immediate problems. One addition to the list of concerns is the continuing dollar depreciation since we met last and its role

in price pressures and overall uncertainty. In the run-up to this meeting, I heard little that casts doubt on where the economy is trending. My assessment is that we have entered recession territory. Previous forecasts premised improvement in the second half on the stabilization of house prices and financial markets. Neither has materialized, nor are there early encouraging signs.

In the current circumstances, financial stability must be priority one. That said, the inflation picture has become quite troubling. Headline inflation, perhaps excluding last month, has been elevated since late summer, as have measures of core inflation, though less so. The expected easing of pressures hasn't yet convincingly set in. A longer view leads to the conclusion that inflation has been relatively high, on average, since 2005. We must be mindful of this as we address financial stability concerns.

I mentioned the dollar's trajectory when I listed what in my view are the relevant considerations today. I am concerned about what I perceive as growing mention of the possibility of a dollar currency crisis. Although only one conversation, I also heard mention of a developing dollar carry trade fueled by interest differentials, expected rate cuts, and possibly the view that recessionary conditions will persist for some time.

Policy is often a balancing act, but I see our current constraints as tightening. The real side has entered recession in all probability. There is increasing risk to the inflation objective. Financial stability is profoundly in play, exacerbated by the trajectory of the dollar, although to be measured about this, I think the current round of financial market problems has not yet thrown the economy irreparably off balance.

I intend to support a downward rate move today, but with reservations about the utility of continuing cuts in addressing financial stability problems. Discussion in the policy round may

address this, but I will comment now that balancing our policy objectives in such a risk-laden environment may require decoupling rate policy from liquidity measures. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PLANALTO. Thank you, Mr. Chairman. Through my conversations with people in the Fourth District financial community, I get the clear impression that some credit channels are closing down. Given the uncertainties in financial markets, some of the large banks in my District are finding it challenging to ascertain potential loss exposures in certain asset categories, especially to residential real estate developers. Two large banks in the District have seen their asset quality deteriorate more quickly than they had projected in January. Clearly, banks and other financial institutions are getting squeezed from both sides of their balance sheets, and the most highly leveraged institutions are getting squeezed the hardest. Many of the large banks in my District are going to considerable lengths to stay liquid and to conserve capital. The largest and most complex institutions are attempting to raise more capital.

The deteriorating environment in the financial markets is clearly affecting business conditions. Most manufacturers in the District have seen a slowing in business activity. Those that are doing better are doing so because they are being helped some by stronger export demand. Pessimism over economic prospects is now prevalent among the CEOs that I talked with, and many are scaling back their business plans for 2008 by a considerable amount. The faltering business prospects are making the financial environment even more uncertain—a pattern that conforms to the adverse feedback loop that Governor Mishkin and others have been warning about. Like others, I have once more cut my growth projections for 2008 and, again, by a relatively large margin. As in the Greenbook, I have factored into my projection the weaker

than previously expected estimates of spending and employment as well as the sharp run-up in energy costs.

An especially important element in my current thinking is the future path of housing values. Many of my contacts have told me that they don't see how financial market conditions can stabilize without more confidence about where the bottom of the housing market lies and, as a corollary, where the bottom of the residential-mortgage-backed security prices might lie. Unfortunately, I haven't seen evidence that we are seeing a leveling out in housing prices. The Greenbook baseline projection carries with it nominal house-price declines of about 5 percent this year and next. A month ago that may have seemed like a reasonably good assumption to me, but today I fear that projection may be too optimistic. Certainly, the decline in house values that one sees in futures markets for the markets that are covered by the Case-Shiller index indicates a decline of twice that magnitude. My own baseline projection is closer to the "greater housing correction" alternative than the Greenbook's baseline projection. Even the "greater housing correction with more financial fallout" alternative seems somewhat plausible to me.

Turning to the inflation outlook, at our January meeting my modal outlook was one in which the inflation trend declined to just below 2 percent in 2010. At the same time, I was one of the few participants who said that the inflation risk had shifted to the upside. I still hold to those views—that is, I still expect the trend of inflation to fall below 2 percent by 2010, but I still worry that we are going to continue to experience upside surprises to that inflation outlook. Indeed, I can't recall a single conversation that I have had with my business contacts recently that hasn't touched on the increasing cost pressures that they are facing. In most cases, they are now successfully passing along price increases to their customers.

Nevertheless, as I assess the economic environment this morning relative to where I was in January, particularly given the prospects of yet larger wealth losses stemming from the real estate market and certainly the chance for even greater impairment to the functioning of our credit markets, I think the downside risks to economic growth continue to outweigh the upside risks to inflation. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. Clearly, the incoming data on activity have been weaker than we expected. I think they point to a downturn in GDP in the first half of the year similar to that in the Greenbook. While the February CPI report was welcome news, on balance I think the inflation picture continues to be troubling. I noticed a marked change in the sentiment of my business contacts this round. Many more are now telling me that the problems on Wall Street are affecting their financing. Credit availability is now an issue. With regard to borrowing from banks, these reports seem consistent with the Senior Loan Officer Opinion Survey. Credit is an issue for those tapping nonbank sources as well, as in the comments that President Yellen made. As an example, back in December a major shopping center developer indicated that, even though the commercial-mortgage-backed security market had dried up, he was still able to obtain financing on reasonable terms from other sources, such as life insurance companies. Last week he told me that these sources had dried up, too. He's now trying to raise equity funding, which he considers very costly and an unappealing alternative.

Many contacts also expressed increased nervousness over the economic situation and its likely impact on demand for their products. Manpower's CEO told me that their business had deteriorated in recent weeks. Some of his clients were trimming staff because of a lower current demand, and many others were being cautious and cutting back in expectation of future weakening.

Still, even though restrictive financing and heightened caution are weighing on households and businesses, there is a sense from my contacts that spending is not collapsing at this point, and exports of capital equipment in the agricultural sector continue to do well, similar to President Hoenig's comments.

Another common theme I heard from my contacts is that, while the Fed's innovative response has helped, they do not expect that these measures will do a lot to solve the financial sector's fundamental problems. I doubt that any of us disagree with that. As one of my directors put it, "Monetary policy is not enough. We need a solution to the subprime mess. Once that happens, the contagion will run in reverse." I believe our innovative policies are helpful for facilitating market functioning, but they don't address the root problem. Markets want a firmer sense of where prices for stressed assets will bottom out and of the magnitude of the portfolio losses that will be taken by major financial players. Unfortunately, it will take a good deal of time before these uncertainties will be resolved, and I'm not sure what we can do to speed the process. After all, a number of these losses are going to stem from mortgage delinquencies that have not yet occurred and perhaps from homeowners who have not even contemplated that outcome. This means that financial headwinds likely will be weighing on the real economy for some time, as President Stern said. I agree with his comments there. The substantial uncertainty over the length and breadth of this process adds uncertainty to the medium-term outlook for growth. So while I am hopeful that the economy will begin to recover in the second half of the year, I'm a lot less confident of that outcome than I'd like to be.

Turning to inflation, Friday's CPI report was about the only good news I heard during the intermeeting period (I think last time the reports weren't very good either, President Yellen), although as the Greenbook Supplement points out, the less favorable translation to PCE prices takes



out some of the luster. It's no surprise that many of my contacts pointed to increasing pressures from higher costs for food, energy, and other commodity inputs. I also heard numerous reports of higher costs being passed downstream. One notable case was for wallboard. Even though demand is weak and the industry had plenty of excess capacity, higher costs for energy inputs were resulting in the first increase in wallboard prices in 20 months. The director who reported this was concerned that pricing behavior is moving toward a cost-plus mentality. This is, after all, his industry. If so, this would have negative implications for inflation expectations. However, I see this as a risk and not a base case scenario because the resource gaps opening up in the economy should bring inflation down. Firms will find it difficult to pass through cost increases in an environment of weak demand. Businesses and financial market participants will be aware of this difficulty in passing through costs, which should help keep down their inflation expectations.

That said, even in a weak economy, firms will have only so much room to absorb costs, and pressures from higher prices for energy and other commodities and for imported goods pose a risk to the outlook. In addition, while I expect inflation expectations to be contained, there are risks on this front, too. Some can see a low fed funds rate path, such as that assumed by the Greenbook, as an indication of a lack of resolve on inflation. I don't agree with that assessment, but it's an increasing risk that we will be running, particularly if the inflation news breaks in the wrong way. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. We've seen two striking macroeconomic developments since our last meeting. We now have compelling evidence that a recession is in train. We now have compelling evidence of erosion in our inflation credibility. Information from our District corroborates a recession call. Various survey indicators and reports from contacts point to

weakness in manufacturing, commercial real estate, and consumer spending. No signs have yet emerged of a bottom in housing. The national reports on employment and retail sales for February have sealed the case for recession. It now appears that payroll employment peaked at the end of '07 along with real income and household spending, and to make matters worse, anecdotal reports suggest that the January fall in nonresidential construction is only the beginning of a sustained deterioration. I'm now expecting a period of declining employment, declining nonresidential construction, and flat-to-sluggish consumption. Equipment and software spending may decline as well. Past contractions suggest a trough later this year. More severe scenarios seem unlikely to me, however. The Great Depression, for example, involved us keeping real rates well above 5 percent for several years as activity slowed and the price level declined 30 percent.

It will take some time before the ultimate size of mortgage foreclosure losses is known well enough to substantially reduce the uncertainty attached to mortgage-backed security returns, and it is not clear that interest rate changes will affect that timetable much. In the meantime, I would expect to see repeated bouts of financial turmoil. When particular markets or entities come under stress, I would also expect to see even wider speculation about and calls for new Fed lending. It's even possible that fluctuations in the perceived prospects for such intervention add to financial market volatility, much the way conjectures about IMF programs seemed to add to market volatility in the 1990s.

After a string of adverse inflation reports, the CPI came in virtually flat for February. While this certainly helps for many reasons, including those Mr. Stockton cited, I'm not inclined to make much of one month's report. The overall CPI is still up over 4 percent year over year, and given the recent behavior of oil and gasoline prices, inflation is likely to be high again in the March report. In any event, I think there is no comforting way to rationalize the substantial rise in the five-year, five-

year-ahead inflation compensation we've seen since the beginning of the year. This measure of inflation was previously ratcheted upward by similar amounts in early 1999, early 2001, mid-2003, and early 2004. In each of these episodes, our actions and statements communicated an increase in our concern about growth prospects, and market participants seem to have inferred a corresponding reduction in our commitment to price stability. The net result over that period is that five-year, five-year-ahead inflation compensation has drifted up significantly over the past ten years, from below 2 percent to now above 3 percent. This expectational drift is likely to overwhelm, in my view, any transitory effect of increasing slack.

I believe inflation expectations no longer qualify as well anchored. Moreover, they no longer seem consistent with the credibility of even a 2 percent inflation objective. I believe that this substantial erosion in our credibility is occurring because of our aggressive policy moves and the perception that the hierarchy of our macroeconomic priorities has changed. It wouldn't surprise me if our recent credit market interventions are bleeding over into a skepticism about our general approach to time-consistency problems. It cannot help to allow our credibility to drift around. I do not think we want a regime in which long-run inflation expectations ratchet up whenever growth slows significantly. Ultimately we will be forced to act to restore credibility. This just adds needless volatility to financial markets and the economy.

I believe we need to adopt a strategy of easing much less aggressively going forward than we have to date and than markets expect. President Stern cited the 1990-91 recession and the fact that both the federal funds rate and inflation came down during that recession. But surely the pace of easing then had something to do with the fact that inflation came down. Unless we're willing to let inflation expectations continue to drift, we have to disappoint markets sometimes. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. First Vice President Sapenaro.

MR. SAPENARO. Thank you, Mr. Chairman. Eighth District economic conditions have softened, but with considerable variability across industries and local areas. The outlook for District agriculture is very strong in the context of high commodity prices. This prospect is reflected in prices of agricultural land, which in areas within the District have risen at a rate of 20 to 25 percent over the past year in active markets. Production of agricultural equipment for the 2008 crop season is fully booked, and prices of used equipment are at or very close to prices of new equipment. There was major activity in the District energy industry, with significant construction projects of coal-fired generation facilities and rapidly developing exploration and production in the Fayetteville Shale play in Arkansas. Total natural gas production from this source roughly quadrupled during 2007. In a recently published study, it is estimated that the direct impact on Arkansas output from exploration and production will average about \$2.5 billion per year for the next five years. For perspective, this is about 2.8 percent of the 2006 Arkansas gross state product. Overall activity in the Evansville, Indiana, metropolitan area is particularly strong. The unemployment rate there has declined year over year from 4.6 to 4.2 percent, and nonfarm employment has grown 1.4 percent from January '07 to January '08. A major investment in the auto parts industry is in the works for this area.

Activity in housing markets in the District is soft, with building permits in the four largest metro areas down on average 16.8 percent during 2007. Nevertheless, house prices in the District have held up much better than the national experience. In 21 District metropolitan areas, house prices increased an average of 2.5 percent in 2007, with decreases in house prices reported in only 3 metro areas. However, in contrast to other parts of the nation, these areas did not experience major house-price inflation before 2007. From 2000:Q4 through 2006:Q4, the average annual price

inflation in these areas was only 5.3 percent. Foreclosures have increased in 2007 in three of the four largest District metro areas but at much lower rates than nationally, and 2007 foreclosure rates are at or below national averages in three of these four areas.

I solicited information on the national economy from a number of sources. Contacts in the air and ground cargo industry report significant cost pressures from higher energy prices. These affect everything from fuel costs to the cost of snow removal. Respondents indicate that these cost increases are significantly but not completely passed through to their prices. International cargo traffic is reported to show strong growth, but with some customers substituting sea for air shipment and choosing less rapid delivery service to reduce cost. Year-over-year traffic out of Asia to both Europe and North America has grown at double-digit rates. One contact indicated that volume appears to have bottomed out in the first half of 2007 and has slowly but steadily improved since. In contrast, a contact in the over-the-road trucking industry reported that there was not much change in the past two months. In his view, the industry has been in recession since December 2006. He sees improvement for his firm going forward not because of increased demand but because of small competitors exiting the industry through bankruptcy. Excluding fuel surcharges, freight prices are flat to down.

A contact at a major credit card bank reported that their credit card activity indicates that retail sales, excluding autos, were flat in February and are likely to be flat to down in March. These February data were confirmed by the advance retail sales report last week. He also reported that a smaller percentage of customers are making full payment on their credit cards and that a larger percentage are making only the minimum required payment. He sees delinquencies spreading to credit cards. A contact at a major software producer indicates that revenue growth was robust prior to the first quarter of 2008 and, while remaining strong, has slackened since the beginning of the

year. He reports strong retail sales, but that was possibly influenced by reductions in prices. He sees business IT spending in the United States remaining strong and no deterioration in the collection of receivables. Nevertheless, he is less optimistic about the industry outlook now than in January. Finally, a contact in the quick service restaurant industry, or fast food, sees business as stable at the moment, not getting worse but not getting better. He notes that while historically this industry is affected least when the economy slows down, this particular time he sees gasoline prices as a significant factor, with many consumers making fewer trips to purchase low-ticket items. He also views financial markets as closed to all but the largest and most highly rated nonfinancial corporations. In his words, there is no market for deals.

The national economy certainly appears headed for a weaker first half of 2008 than seemed likely at the January meeting. A model estimated by our staff economists for forecasting recessions suggests a probability in the neighborhood of 60 percent that the NBER dating committee will label the current experience an official recession. Unlike some, I am not an optimist on the effect of the fiscal stimulus program on consumer demand. Economic theory and past experience with such one-off stimulus programs do not provide a basis for assuming a strong response. In the current situation, with many consumers heavily leveraged, it is likely that the stimulus to consumption will be less than historical averages.

Notwithstanding the February CPI report, the inflation situation is deteriorating and appears likely to continue deteriorating. Beyond the immediate issue of containing systemic risk, the most important issue is the subsequent economic recovery. We have eased aggressively already. We must not lose focus on the lagged effect of current policy actions on that recovery. We must preserve the credibility of our commitment to low and stable inflation. The greatest danger is a relapse into a period of higher inflation, which then promotes a policy response that could generate

a future recession and start a vicious cycle of increasing inflation and increasing unemployment.

Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. As anticipated, Third District business activity showed continued weakness in February and March. Reports from retailers, manufacturers, bankers, and other business contacts remain somewhat downbeat. At the same time, there has been little moderation in price pressures facing our firms and consumers. There is little new in the regional housing markets. So rather than dwell on housing, let me talk about some of the information that we have received since our last meeting.

Banks in the Third District have generally been relatively unscathed by the toll on the financial markets. Many had not been in the subprime market and did not have instruments based on subprime. They do, however, hold a high proportion of commercial real estate and residential mortgage loans in their portfolios. So to the extent that the commercial real estate market slows as we expect, our banks are likely to be feeling the effects. Bankers, thus, have become somewhat more pessimistic over the past six weeks or so. They don't expect financial conditions to improve any time soon, and several noted signs of declining business loan demand, which they had not been seeing earlier. Bankers also report some deterioration in personal-loan credit quality and are expecting increases in credit card delinquencies. Despite these increases, these delinquencies and default rates so far remain well within historical norms.

Manufacturing outlook activity in the District remains weak. Our March business outlook survey is confidential until we release it this coming Thursday. It will show a little improvement in February's dismal readings. Since the beginning of the year, the general activity index has been at a level typically associated with either a national recession or a substantial slowdown in economic

growth. So despite the modest improvement, it doesn't move us out of negative territory.

Responses to a special survey question in February indicate that the majority of our firms considers their inventories to be at an appropriate level, and firms are unlikely to substantially replenish these inventories until midyear or later. But it doesn't seem as though there will be more-dramatic reductions in inventories—as, for example, in the Greenbook's basic story, where there's a very large inventory correction, it appears.

Despite the weakness in activity, there has been little moderation in price pressures in the District. The current prices-paid index in our business outlook survey continues to accelerate, and both the prices-paid and prices-received indexes over the past three months are at very high levels relative to the last twenty years. Firms in various sectors, not just manufacturing, were reporting significant increases in prices, particularly of imported inputs. Although our firms are expecting continued weak real activity, they expect prices to rise over the next six months. Indeed, the forward-looking price indexes in the survey are at very elevated levels, and the future-prices-paid index is at its highest level since the early 1980s. Our firms seem to be as skeptical as I am of the arguments of the critical link between inflation and resource utilization.

Turning to the national outlook, I struggled coming into this meeting with a growing level of discomfort. There are four dimensions to my concerns: first, the outlook for growth; second, the outlook for inflation; third, the calibration of monetary policy given that outlook; and fourth, the turmoil in the financial markets. First, in terms of near-term economic growth, the outlook has deteriorated somewhat since our last meeting. I expected weak growth in the first half of the year, but the incoming data suggest that growth will probably be somewhat weaker than I anticipated. I and many private-sector forecasters, like the MA or the Blue Chip survey summaries, have responded to the incoming data with downward revisions to our forecast for certainly the first half



of 2008. But our changes are considerably smaller than the revisions in the Greenbook's forecast, which have revised down personal consumption in 2008 from 2.3 percent in the January forecast to zero in the current forecast while incorporating significantly more monetary policy stimulus. I realize that the Board's staff has a good track record, but I am not wholly comfortable with the Greenbook's forecast, which I think incorporates a number of judgmental adjustments that are responsible for taking it pretty far away from where private-sector forecasts now are.

Second, I'm just less comfortable with the inflation outlook. I've said before that, if inflation expectations become unhinged, we will face an even more difficult problem as monetary policy will feed more quickly and directly into higher inflation outcomes. The ensuing loss of credibility will be costly to regain. I wish we had the luxury of waiting for unambiguous evidence that expectations have lost their anchor. But if we wait until then, it will be too late. This means that we have to look for early warning signs so we can take appropriate action to ensure that expectations remain anchored, and I am concerned that we are seeing those warning signs. Despite last Friday's CPI numbers, headline and core inflation have been trending up. Oil prices are at record highs. Commodity prices continue to trend up, and the dollar has fallen sharply.

Our business and consumer contacts are consistently stressing price pressures as a concern. These developments concern me partly because research indicates that inflation actually may have become less persistent since the 1990s, and I think we have to be careful not to interpret the lack of persistence independent of what monetary policy actions are taken. Moreover, inflation expectations measured by surveys and market-based measures have all risen over the last couple of months. Inflation risk premiums have risen, which could be an early warning signal of a waning credibility or commitment on the part of the Fed. The National Association for Business Economics

survey in early March shows that a third of the respondents think that monetary policy is now too stimulative, and that is up from less than 10 percent just a few months ago.

According to a special question on our November Survey of Professional Forecasters—I reported on this several meetings ago—half of those forecasters, 23 out of the 45, believe that the FOMC has an inflation target. Of those 23 forecasters, 20 believe that long-run inflation over the next ten years will be 50 basis points or more above what they view our inflation target is. I might be able to shrug off one or two of these, but the predominance of these signals has me concerned about the risk to our credibility. I'm also concerned that the public seems to perceive that the Fed has effectively set aside one part of its mandate, price stability, in our all-out efforts to promote economic growth. Said differently, it seems to suggest that not only are we incorporating new data into our loss function as our forecasts change but we are changing the coefficients on that loss function. I don't believe that we are necessarily doing that, and I don't believe that's the right way to make policy, but I do believe that ultimately it's up to us to make that clear to the public as best we can.

Third, we have to calibrate the appropriate level of the funds rate and not just its rate of change. This is not an easy task, especially in the current circumstances. We have reduced the targeted funds rate by 225 basis points since August and 125 basis points in just the last six weeks. It is simply too soon for the economy to have felt the full effects of these rate cuts. While the recent deterioration in the outlook might suggest that we need easier policy, I believe that the recent increases in inflation expectations mean that the real funds rate has already fallen either below zero or close to zero depending on how we measure it. For example, the real funds rate is now minus 1 percent, which is below the more pessimistic Greenbook-consistent  $r^*$  of minus 0.5 percent given in the Bluebook, if you measure the real rate as the nominal funds rate minus the Greenbook's one-

quarter-ahead forecasted headline PCE. The Greenbook suggests that the real funds rate can be negative over the next two years and inflation will continue to decelerate as upside inflation pressure is offset by greater slack in product and labor markets. I am skeptical. This outcome is predicated on inflation expectations remaining well anchored despite aggressive and persistent easing for a sustained period of time. Given the current fragility of inflation expectations, this seems very unlikely to me. The alternative Greenbook scenario with more inflation pressure from oil and imported goods suggests a steeper policy path and higher inflation by 2010-12.

Fourth and finally, like everyone else, I am very concerned about the developments in the financial markets. I've been supportive of the steps we've taken to enhance liquidity in the markets through the TAF, the TSLF, the PDCF, or whatever.

CHAIRMAN BERNANKE. AEIOU.

VICE CHAIRMAN GEITHNER. Don't say IOU. [Laughter]

MR. PLOSSER. Well, I've been supportive of those, and I want to compliment the New York Desk and the people who have worked on this because I think they are very innovative. I'm not clear how successful these instruments will be, and they are not without their own set of risks of creating some potentially dangerous expectations regarding future Fed behavior, which eventually we must deal with. But I think they are worth trying as long as they are removed in due course. I can also support a further narrowing of the spread between the funds rate and the primary credit rate, although I would eventually like to see a review of what we think that spread ought to be in more normal times and what our exit strategy might be like as we move toward that. Giving some thought down the road to that I think would be helpful.

So while I believe that we have appropriately reduced the funds rate in response to the worsening economic outlook for the real economy, I am less convinced that reducing the funds rate

further will do much to stem the liquidity problems in the market or to lower risk premiums.

Uncertainty about valuations seems to be the root cause of liquidity problems. The price discovery process needs to continue, and it may take a while. In this case, I think the Fed needs to continue to do its job to reassure markets that it will act as an appropriate lender of last resort, but we must be careful that a lower funds rate, if that is the path we take, doesn't become just a form of forbearance that contributes to delaying the necessary writedowns and the price discovery process itself. Yes, the financial markets can have spillovers to the real economy to which the Fed needs to react with monetary policy, and I believe we have. At the same time, we need to keep focused on both parts of our mandate. We put our credibility at risk if we do not do so, and this would be a cause for severe problems later when we may need to act to regain it. We will have to face the fact at some point that we will disappoint the markets with their ever-increasing forecast of a lower funds rate. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Okay. Thank you. It's 10:35. Why don't we take twenty minutes for coffee. Thank you.

[Coffee break]

CHAIRMAN BERNANKE. Okay. Why don't we reconvene. Let's start with President Fisher.

MR. FISHER. Thank you, Mr. Chairman. Mr. Chairman, today is my 59th birthday, and I can't think of a better group of people to spend it with—or a less happy time to do it.

MR. KROZNER. We sure know how to take the punch bowl away from this party.

[Laughter]

MR. FISHER. Well, listen, I know we are suffering because our Deputy Secretary here sitting to your right, Mr. Chairman, just gave me a candle and had me blow it out with no cake

attached. [Laughter] I want to use very quickly just four examples of what I think is going on with the economy. The first is that 21 miles of boxcars that are 89 feet in measurement each and usually carry lumber are laid up on railroads. The second is that there's a labor shortage in the Yangtze River Basin, according to one of my interlocutors. The third is that Exxon is rolling \$39 billion in cash in overnight deposits. The fourth is, just to keep you listening, that I am going to come back to my ninth birthday in conclusion.

As to the 21 miles of boxcars, the average length of a flatbed car that carries lumber is 89 feet. Burlington Northern has 21 miles of it laid up. I mention that because, according to my contacts at the happy housing group that I talk to that builds a significant portion of homes in this country, this housing setback, as they put it, is worse than '75, '81, and '91 combined. I have been a bear on housing from the first time I came to this table, and I agree with everything that has been said about the downside pressure that is being exerted by housing. I would add a couple of points just to underscore that. One is the 21 miles of flatbed cars that are laid end to end. The other is a concern I have from my interlocutors at UPS in that the past six weeks they have seen a downturn in their volume of 2 percent. The CEO describes that as a very unusual swing from an up 3 percent in January and something that he has not seen before, and I want to remind you that he was a CFO for many years. The third point is on the growth side, something that perhaps we can monitor going forward: Wal-Mart now polls one million customers. They started doing so last April. There are some imperfections in their polling. They find that 67 percent are concerned about the economic situation, particularly about their financial matters, driven largely by perceptions of their decreasing wealth in their homes but also, more importantly, by cost-of-living factors such as gas prices and the cost of money.

With regard to the comment on China, at a conference in Paris recently, Governor Kohn, Presidents Evans and Yellen, and I had the pleasure of listening to Mr. Yi, who is the Deputy Governor of the People's Bank of China. He made the comment that there is a shortage of labor in the Yangtze River Basin, which I found quite startling. I followed up with him on that conversation more in depth, and because of that, I am not surprised to hear about the inflationary forces that were spoken about at this table. It goes beyond energy, Mr. Chairman, and it goes beyond food, although I want to make some comments on food. I talked to several food producers, and they are all intending to pass through price increases of somewhere between 5 and 15 percent. Most distressing to me was Anheuser-Busch, since I am a beer lover. The cost of input of hops and barley has gone up 3½ percent. When you add aluminum, transportation charges, and other things, it totals almost 15 percent, and they expect at the retail level for the price of beer to be passed through at about 5.7 percent. So, say, 5 to 6 percent. Combine that with the largest producer of pizza crusts, who is expecting a 20 percent increase in the price sought for their product, then you get a sense of a broader issue at hand on food. Let me summarize that broader issue. I want to come back to Wal-Mart. They sell 10,000 food items. They expect an average price increase across those 10,000 items that they are budgeting for this year of a little over 5 percent. According to a senior official, "We will be aggressive about pricing. We are lagging in terms of our price increases as price leader, and now we are working aggressively to catch up." That leads to concern on my part. I am well aware of the fact that we have not seen increasing demands from labor, but I don't consider labor to be a domestic phenomenon. I consider it to be a global phenomenon, and I am concerned that you are hearing such reports in areas where our producers have offlaid certain manufacturing processes and sourcing of inventory, including in China. I, therefore, would suggest that they bear watching.

With regard to the comment about Exxon's rolling cash, to me this gets to the heart of the issue, and that is that I don't believe, as Mr. Evans said, that monetary policy is addressing the root problem. The root problem is a problem of liquidity, solvency, and trust. When you have a sophisticated operation like that rolling cash in overnight bank deposits, it raises significant alarms to me because it indicates a lack of trust in the system through which you might otherwise conduct your cash and liquidity operations. I liken the situation, Mr. Chairman, to the following—and forgive my simplicity. I'll use a hydraulic rather than a medical example, which I am often wont to do. We are the water main, and yet the grass is turning brown. The water is not getting to the grass because the piping is clogged with all the hair and residue and all of the ugly stuff that has been building up in this Rube Goldberg piping device that we allowed to happen over a long period of time. I don't believe that cutting the fed funds rate addresses the issue. I do believe that the measures we have undertaken recently to enhance liquidity, to improve the functioning of the system, and to address the solvency issues are of significant import. Earlier you mentioned the Duke survey of CFOs. Seventy-five percent of those CFOs said fed funds rate cuts were not helping their business operations. I would have expected otherwise. After the last meeting, praying against my own vote, I hoped that everything that we had hoped would go up would go up and everything we had hoped would go down would go down—spreads et cetera. Yet if you look to the chart book—the Bluebook, for example, or the presentation earlier this morning—almost every single graph of what we had hoped would go down went up and vice versa; and I think that indicates that there are limits to the efficacy of cutting the fed funds rate.

I said I would conclude with my ninth birthday. When I was nine years old, three-month Treasury bills were trading where they are today. Thank you, Mr. Chairman.

VICE CHAIRMAN GEITHNER. Mr. Chairman, may I ask one clarifying question?

CHAIRMAN BERNANKE. Certainly.

VICE CHAIRMAN GEITHNER. President Fisher, did you just say the efficacy of “any” cut in the fed funds rate?

MR. FISHER. I believe that the efficacy of the cuts that we have undertaken has been diminished by virtue of the liquidity–solvency crisis.

VICE CHAIRMAN GEITHNER. I completely agree with that. But just to make sure that I didn’t misinterpret you, did you say the efficacy of “any” further cut?

MR. FISHER. I think it is pretty clear that I am not going to vote for further cuts.

VICE CHAIRMAN GEITHNER. No further cuts.

MR. FISHER. At this juncture. Look, Tim, we cut rates 50 basis points last time. I was in a minority of one, and I respect the group around this table more than I respect myself. Here is the point: Everything that we wanted to go down went up, and everything that we wanted to go up went down. So I just wonder about the efficacy of the cuts as opposed to the measures that we have undertaken.

VICE CHAIRMAN GEITHNER. I wasn’t debating. It was just a clarifying question.

CHAIRMAN BERNANKE. Okay. Governor Kohn.

MR. KOHN. Thank you Mr. Chairman. I agree with the others around the table who have said that the prospects for economic activity have taken another sizable leg down over the intermeeting period. I think we have been, for a time, in that adverse feedback loop between financial markets and spending that everybody—Governor Mishkin and others—has been talking about. That is not an unusual kind of loop to be in during a soft economic period. I think it is probably characteristic of a lot of slow growth and recessionary periods. But certainly it has



been more intense this time because the financial turmoil has spread well beyond housing and has intensified significantly over the intermeeting period.

The incoming data on spending, employment, and production were weaker than expected. House prices are moving lower by more than we or the markets expected. All of these data have accentuated concerns about the creditworthiness of households and businesses and, hence, about the creditworthiness of the people who lend to them, especially those who lend in the mortgage market. As perceptions of risk and risk aversion rose, there was a flight to safety and liquidity. I think we see that a little in the growth of M2 over the past couple of months, which has been very, very strong and suggests that households are retreating to money market funds, probably the ones that hold government securities, and to insured deposits. In wholesale markets there has been unwillingness to take positions and rising concerns about an array of intermediaries. Bill described this process much better than I could—illiquid markets, extreme volatility, deleveraging, margin calls, forced sales, especially in mortgage-backed securities, wider spreads, equity prices falling, and lending and funding tenors collapsing toward the overnight, again. So financial conditions have tightened for everybody but the government—and some of the European governments have seen them tighten, I guess. Mortgage rates have risen, and business bond yields have risen as well, even with Treasury rates going down. Tighter credit and declining equity and house prices are reducing wealth, and all of this weakens spending further.

Now, to this process, the staff has judged that the economy has entered a recessionary state in which we can expect household and business spending to fall short of normal levels, given income and interest rates. I am not sure how much weight to put on this. I am a bit uncomfortable with constructs that don't have a clear story behind them. But I must say that, looking at the sentiment indicators and listening to what I have heard around the table today from

almost every Federal Reserve District reporting, I now put more credence in Dave's recessionary state than I did before the meeting started. Obviously, something is going on that is undermining confidence and making people much more cautious than you would think, given the exogenous variables. I do think talking about the recessionary state underlines the extraordinary uncertainty we are dealing with. President Stern pointed out the 1990-91 precedent. There are some precedents for some aspects of this, but we don't have many; and I think it is really difficult to know how financial markets will evolve and how that will feed through to the variables that affect household and business spending—the reaction of households, businesses, and state and local governments to tighter credit conditions.

I agree with President Stern, President Evans, and others who said they thought that the financial stresses are deeper and will last longer than we thought and will, therefore, put more restraint on spending. Until markets stabilize on a sustained basis, the risk to satisfactory economic performance by the U.S. economy will remain skewed very much to the downside. Now, Federal Reserve liquidity tools that we have used are necessary to reduce the odds on even more-intense, downward-spiral crises and market liquidity feeding back onto spending. So I think our innovations here have been useful to reduce the downside risks a little and thereby to promote spending. But I agree with the others who say that they don't directly deal with the underlying macro risk, which is really a story about capital, solvency, wealth, and prices.

I think monetary policy easing is a necessary aspect of addressing these macroeconomic risks. I agree with President Fisher, President Plosser, and others that there is more going on and that monetary policy easing may not be a sufficient way of addressing these risks. But I do think, as long as the economy is weakening the way it is and we have these risks, that easing monetary policy will be helpful. It will help bolster asset prices. It will make the cost of capital

lower than it otherwise would be. It may not be sufficient to turn the thing around, but I do think that without the easing that we have done—and that I hope that we do today—the situation would be far worse than it otherwise would be. We need to ease to compensate for the substantial headwinds that we are facing.

Now, the forecast for inflation has not been marked down despite the greater output gap. As others have remarked, this output gap is offset, to a considerable extent, by the upward pressure on prices from oil and commodities and import prices as the dollar has fallen and prices have risen in our exporting partners—China, for example. I have to confess that I don't really understand what has been happening to commodity prices in recent months. I don't think the rise has been justified by the news on the underlying conditions of supply and demand. It is much larger than the dollar weakness has been, and the dollar-commodity price has always been a weak relationship. So, in fact, commodity prices are rising in a bunch of currencies. This isn't just a dollar weakness problem. I have to believe that there is a speculative element here. Partly as a consequence, I am comfortable with the forecast of a flattening commodity price picture in the future—it might even decline, but at least a flattening out.

I do think a shift from financial assets, especially dollar assets, into commodities is going on, and mostly this has been triggered by concerns about the U.S. economy and financial markets. In some sense, that shift is okay. It is driving down the dollar, and that is helping to stabilize the economy. The decline that we saw in oil prices yesterday suggests that, when people get more confidence about where those financial markets are going, some of those commodity prices will actually fall as the concerns about the U.S. economy are alleviated. It is sort of an upside-down relationship, but I do think we saw a bit of it that way. But I also sense that some of the rise in commodity prices and the fall in the dollar reflects concerns about the

inflation outlook here. It is not surprising to me, in a very volatile and uncertain environment, that inflation expectations are not as well anchored and that they fluctuate a lot in response to new information. I expect that inflation will come down as commodity prices level off; then the output gap will increase, and that in turn will keep inflation expectations down. Still, navigating this appreciably weaker economic outlook for the real economy and the threats to financial stability, on the one hand, and the tenderness of inflation expectations, on the other, will require some discussion in the next section of our meeting, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. To join the growing chorus in the discussion today, I would say that there are very significant policy challenges across five areas on both sides of our mandate. First, the real economy is materially weaker. Second, inflation risks are quite discomfoting. Third, we have genuine issues with respect to financial stability. Fourth, we have very real problems with respect to the credit channel and credit availability. Finally, as I think a couple of others have said, we have risks in terms of possible disorderly moves on the dollar. In terms of what markets believe that we believe are the big concerns, I think they rightly understand that we are very worried about downside risks to the economy. They believe that we are very focused on financial stability risks; and with the three new facilities announced in recent periods, they are coming to believe that we are finding an effective means to deal with a credit intermediation system that is, to perhaps overstate only a little, broken. But market participants may not yet believe that we are as concerned as we ought to be about inflation risks and about risks with respect to the path of the exchange value of the dollar.

With that summary having been made, let me talk, first, about financial market conditions. About the deterioration in market functioning since the last FOMC meeting, Bill

spoke in great detail. Over the past couple of weeks, not just in the episode with Bear Stearns, counterparty risk has become the dominant concern in markets. As has been pointed out around this table, it is increasingly difficult to separate liquidity issues from solvency issues. So what should we take from this deterioration in counterparty risks? If we look at a range of financial institutions that have different degrees of implied backstops by the government based on their size and their regulatory structure, we think about the GSEs that have an implied government guarantee and even Ginnie Maes, which have the full faith and credit backing of the U.S. government and about which the Board staff shared some data yesterday with us. The spreads on all of these look as though they have widened substantially. We have seen very real deterioration. But when you see that it is happening for the Ginnie Maes, just as with many of these other securities, it suggests that this is substantially, but not completely, about liquidity risk because the credit risk of Ginnies ostensibly can't be called into question.

Financial institutions, more broadly than financial markets, are having a hard time finding their way. We have talked around this table before about their balance sheet problems, and most recently we have talked about their income statement problems in figuring out what their core business is. In the markets in the last couple of days, we have had the broker-dealers with widening CDS spreads and falling share prices, and of course, that is about their mortgage exposure and liquidity concerns. But I think, most fundamentally, that the business model of investment banks has been threatened, and I suspect the existing business model will not endure through this period. As a result, the current architecture of the regulation of financial institutions and of the business model across ranges of financial institutions—commercial banks, investment banks, and hedge funds—will change through this period. The old model, at least in investment

banking, of high imputed leverage works incredibly well in a world of high liquidity and doesn't work as well when liquidity is in short supply.

Why do I think this matters? It matters because it suggests that any catalyst for improvement from financial institutions feeding into the real economy for the rest of 2008 or even for the first half of 2009 is quite suspect. These institutions are spending all their time and attention on their own business models, figuring out how they can survive this period, not on providing credit to the real economy. So I don't look to financial institutions to be very good shock absorbers or very good catalysts going forward. My concern, broadly, about financial institutions is highlighted when I think about the need, across all these institutions, to raise significant capital for safety and soundness purposes and, in addition, for credit availability purposes. It strikes me that this broad class is systematically undercapitalized, and we need to use all our tools to persuade them that it is in their interest and in the interest of the broad economy for them to raise capital.

But finding capital, certainly over the next six months, will be a very real challenge. The capital markets are not in a very strong position to satisfy issuer needs at present. That obviously can improve over the next couple of months, but there is no certainty. Sovereign wealth funds and other sources of investment that we have been talking about for some time—and we saw their real interest in investing in financial institutions at the end of last year or early this year—are quite beaten down. Those that I talked to, who are very sophisticated investors from places in Asia and the Middle East, do not want to appear as though they are doormats for these financial institutions. Their own political structures make the losses they have had to endure front page news. I think the expectation that sovereign wealth funds are going to continue to be a source of funding in this period is well overstated. Moreover, private equity—the case for

opportunistic capital—has little ability to get leverage in this environment, and so if they don't reduce their target hurdle rates, I don't expect them to be able to come to the rescue. All of that, again, suggests to me that the real economy will have to wait awhile for improvement as this repair is slow and not at all certain over the next six to nine months.

Obviously, the implication for the real economy is hard to speculate about, but I think, looking at some rough measures, maybe a third of the credit availability of the real economy has been taken out during this period—maybe more than that. I would say that the last week makes it hard for us to judge how much more credit channel capability and balance sheet capacity have left the real economy, but it suggests a picture for the real economy that is worthy of real concern. Now, when I look to the real economy, I would just underscore the comments I have heard from others. A couple of CEOs who have been incredibly optimistic, at least in my discussions with them in the past couple of years—these are CEOs of leading consumer product companies—have thrown in the towel. They have given up trying to justify and explain away weakness. Across the auto sector, a couple of the new owners of the auto companies are now focused on a scenario in which units are in the 14.5 million range rather than the 15 million or 15.5 million range, largely because of weakness of consumption in terms of consumer purchases. But that really goes back to credit, and in some ways the credit availability to fund those auto purchases is a chance for another stepdown in the next month.

I think that business cap-ex is as threatened as has been represented today. It is the only area for which my own sense is probably more negative than the Greenbook's in terms of weakness to expect out of Europe and the United Kingdom. It is hard for me to think, as we go through this period, that Europe and the United Kingdom would stay as decoupled as recent data suggest. Their economies are tied to their banking system more concretely than we are tied to

ours, and I suspect that their large financial institutions are going to suffer real problems during this upcoming period. If not, it is certainly a risk factor.

Let me turn to the last two issues—inflation and currency. On the inflation front, there is little reason to be confident that inflation will decline. There are reasons to believe that our inflation problems will become more pronounced and, I fear, more persistent. The recent run-up in energy prices and commodity prices in the context of weaker global demand is troubling. No doubt partly it is a move to real assets by the financial community—that is, a hedge against all of this is certainly, to the Governor Kohn's point, raising commodity prices. But I am not sure what catalyst will change that over at least the next six months. As the Board staff has noted, there has been some rise in inflation compensation and inflation expectations. There is acceleration in the fall of the exchange rate of the dollar, suggestive of increasing import inflation. Moreover, it is not obvious to me that a slowing economy in this cycle, in the short term at least, will do our work for us on the inflation front.

Finally, let me turn to currency. Given this particular confluence of events, the accelerated depreciation of the dollar is troubling, and I think the risks of a disorderly move on the dollar in the upcoming six weeks are hard to discount. The catalyst of that could be a sudden de-pegging by certain countries in the Middle East. But even if that does not come to pass, there is an expectation in the market, where traders are looking for bets where they believe they can make money with certitude, that there is still a free one-way bet on the dollar. That is not healthy for currency movements, regardless of one's view of where the dollar should ultimately be trading against the currencies of our trading partners. At this time, particularly, given our concerns about making sure that the U.S. economy remains open for foreign direct investment—that this is where others want to invest their capital—it strikes me as a reasonably dangerous



prospect if the view is that the dollar will continue its accelerated path. Obviously, this suggests very difficult judgments for the next round of our discussion, and I will take up monetary policy in that context. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thanks. I've talked many times before about the slow burn from the financial markets that is spreading out elsewhere. Unfortunately, I think the fire is a bit hotter than I had expected in my earlier discussions, and it comes particularly through capital pressures in the financial institutions. What we're seeing now is the simultaneity of stress in the housing market and stress in the financial markets, and they will be cured together. I think they are joined at the hip. Whether we have tools to address those directly is something we continue to discuss, but I think it is this direct connection that potentially leads to the negative feedback loop that we have discussed quite a bit. For housing, of course, there are the direct negative wealth effects but also the lingering uncertainty of what's going to happen, as many people have mentioned. Part of this comes from just a change in behavior. People are acting very differently during this housing cycle from in the past, so it is very difficult to predict the evolution of foreclosures even given a particular macroeconomic outcome. There's still the uncertainty of the macroeconomic outcome, but people are going delinquent much earlier—they are going delinquent on their houses before they go delinquent on their credit cards—and so it is really a different model of consumer behavior, which makes valuing the securities particularly problematic. This is, of course, in addition to uncharted territory in terms of real and nominal price declines. We'll see exactly how people will respond to these things. Obviously the markets are closed, and the banks have to keep these on their books, with higher cost and more difficulty financing. Some of the changes that came in with the stimulus package to raise the conforming limits for Freddie Mac and Fannie Mae have done little to bring

down the spreads because they have significantly increased the cost of the guarantees given this new environment. It's not unreasonable to do that, but the potential benefit from the changes is lower than we might otherwise have hoped for.

This is all having consequences for credit cards. Even though at first it was the mortgages, now we're starting to see a significant uptick in delinquencies on credit cards and spending, and a number of people—President Rosengren, President Yellen, and First Vice President Sapenaro—have mentioned some of these things. I just want to report a bit from my conversations with some of the major credit card companies, which have kind of a window into real-time consumer spending. They are seeing a continuing flattening but not a falloff of growth. There's no collapse but certainly a continued downtrend, as I've been reporting over the past few months—a continuing slowing of payments and a continuing increase in delinquencies. Their so-called roll rates of people moving from 30 days behind to 60 days behind to 90 days behind continue to go up. They are still going up, although not significantly. They are concerned about that, but it is not spiking up. They are mainly concerned about when the roll rate gets into 90 to 180 days. They're not getting their money back. Personal bankruptcies are going up. The cure rates are much lower, and the recovery rates are much lower. So there seems to be a group of people who are getting into extreme financial difficulty. All the series that I've quoted are general averages. The contacts said that in areas of particular housing stress basically all of the numbers are three times as high. It is significantly more stressful there, showing a very clear link between stress in the housing market and these other stresses.

Have they been responding? Well, because of very strong pressures that may be coming directly from us and certainly from Capitol Hill, the credit card companies don't respond by changing interest rates. They respond by reducing the amount of credit available, and that's exactly what they've been doing. So they've been cutting credit lines of a lot of people. Also, as I think

President Yellen or a number of people mentioned, they're also cutting back on the HELOCs because they have been concerned that people are taking money out when no equity is there, and so they really want to pull back on that. These overall tightening credit conditions are reflecting the continued stress on the balance sheets of banks and financial institutions more generally; as you see with the Bear Stearns example, it's not just the depository institutions but a broader set of institutions that are creating pressures both on the asset side and on the funding side. We have had a lot of the SIVs and a lot of the other assets coming on board. Unplanned asset expansions may continue, particularly if the economy does go down. What now seem to be very good credits in the leveraged lending market may no longer be good credits. So the anecdotal evidence that you've been mentioning around the table could turn into further unplanned asset expansions if these things start to go south.

Consumer write-offs, obviously, are another thing that is putting on funding pressure. Also as I think President Evans mentioned, interestingly there have been few actual losses that have occurred on many of these securities in terms of the inability to make the payments, although the losses in the value in the markets have been quite spectacular in some cases. Some of this has to do with the broad evaluation uncertainty. Some of it has to do with liquidity. I think this is where we have the direct link between liquidity and macro stability because the uncertainties in part are coming from the macro uncertainty about how housing markets will evolve. Obviously I have said this before. There are other factors that come in, but that's a big one.

So doing something to provide some insurance against that or to help provide comfort that these markets can come back is important because there's a very close link between liquidity issues that we have been seeing, the unwillingness to finance, and the capital issues that have been coming from an incompleteness of markets. The markets just aren't there for people to be trading in. They

are valuing things off an index. The index can't be arbitrated against the underlying markets because the underlying markets aren't there. So the index is doing something else. It's the only somewhat liquid market that's providing some hedging. It's driving that down, and people don't want to buy the underlying security because they'll have to take the mark against this index rather than the true value. If they have to take the mark against something that they think is going to be pushed down artificially, they're not going to buy the security in the first place. These kinds of continuing stress make me feel a little less optimistic about the bounce-back in '09 that's in the Greenbook, although I don't think it's ruled out.

Just turning quickly to inflation, we have a bit of a paradox in what has gone on recently as everyone has said—significantly slowing growth over the past four to five months but no evidence of slowing in the pressure on commodity, energy, and agriculture prices. That's despite some slowing elsewhere in the world and expectations of slower growth. The PPI numbers that came out today raised some concerns that some of the good parts of the CPI will not be flowing through to PCE. Also, over the last year or two, when we've had the unemployment rate below 5 percent or 4¾ percent, whatever your favorite number is, where there would be pressure on wages, we haven't seen much pressure on wages. So I'm not sure that, if the unemployment rate goes significantly above 5 percent, we'll see much on the other side that will take pressure off wages to bring things down. So I do remain concerned there. But I think there's a final risk that, if commodity, energy, and agriculture prices do significantly move down, it could have a major effect on some of the emerging markets and some of our other trading partners. So there's a bit of a paradox here that, if there are some potential benefits of the slowdown to reduce these prices, that could actually also reduce export demand, which—as a number of people pointed out—is very important in the forecast for keeping this a shallow recession. So I remain concerned on both the growth front and the

inflation front, but I do think that macro stability is probably the primary thing that we need to be thinking about right now. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. Thank you, Mr. Chairman. Well, I'm quite depressed. That's not my usual personality trait, but the reality is that we've had as bad a set of shocks as I could have imagined, and I want to talk about this set of shocks. We have been hit with things that are making our policy environment as complicated as I possibly could have imagined. The reality is that we are in the worst financial crisis that we've experienced in the post-World War II era. I don't think we should be shy about saying it. We are in a financial crisis, and it is worse than we have experienced in any other episode of financial "disruption," which is the word I use. I will not use "financial crisis" in public. "Financial disruption" is still a good phrase to use in public, but I really do think that this is a financial crisis. It is surely going to be called that in the next edition of my textbook.

PARTICIPANT. When is it coming out?

MR. MISHKIN. Wouldn't you like to know! I believe that actually the Greenbook forecast of a mild recession is reasonable, but the possibility that we could have a severe recession is uncomfortably high, and I find the prospect pretty scary. The reality is that we are in this adverse feedback loop that I and others talked about. I think we're deep into it. The credit markets have been deteriorating. That's led to a sharp weakening of the economy's prospects. This is reflected in the very large change in the Greenbook forecast, with which I do strongly concur, so I don't think that it was out of line to put those in. Of course, that weakening has been feeding back to deteriorating financial conditions. So I think we're really in a tough pickle, and there are costs not just in terms of the economy. One result is that we've just expanded the safety net to a much wider set of institutions, and we are in a brave new world here, and it is very disturbing. So the

ramifications in terms of the economy weakening and the adverse feedback loop go beyond just the fact that we might have unemployment. It may have major effects on the way markets work in the future, and that, I think, is something that we should be worried about and should be a consideration as well. The bottom line on real activity for me is that the prospects are very poor, and I find the downside risk just plain scary. That's the first part of my depression.

The second part of the depression is that it's bad enough that we had these contractionary aggregate demand shocks from the financial sector, but we also have had very negative supply shocks that are both contractionary and inflationary. So we are getting hit by the double whammy. The news on inflation has generally not been good, even with the recent CPI numbers. But then, of course, they are reversed by the PPI numbers today. I don't put that much weight on the actual current numbers because, as you know, I take a view that the primary drivers of inflation and inflation dynamics are inflation expectations and expectations about future output gaps. So that's the framework in which I'd like to discuss what will happen on the inflation front.

We have two problems in terms of inflation expectations right now. One is the supply shock, which I think is having some effects on inflation expectations, and also the view—although I believe it's incorrect, I do think that there's a problem that this view is widely held outside, and President Plosser mentioned this—that we on the FOMC are focused only on growth and are not at all worried about inflation. This is a communication issue that is hard to deal with because, even though I've been advocating being more aggressive in terms of easing, I do worry very much about the issue that we also have to indicate that, if necessary, we'll get out the baseball bat to keep inflation under control. That is not an easy thing to do. So when I look at inflation expectations, which I consider to be a key driver of inflation, I think that the evidence in the data is that we have had not a big increase but a slight increase in inflation expectations, on the order of about 10 basis

points. There's a lot of uncertainty about that; it could be a little more than that, but I don't think a whole lot more.

Also disturbing is that we certainly have had a big increase in long-run inflation uncertainty. That's reflected not only in terms of inflation compensation but also in the fact that people are buying inflation caps, TIPS are becoming very popular, and so forth and so on. In fact, one of the negative things that happened to me as a result of taking this job is that I had my entire TIAA-CREF in TIPS and unfortunately I had to divest all of it because they are government securities, and that turned out to be bad. But that's only one of the minor costs of being in this position. [Laughter] The issue here is that, although I don't think that inflation expectations have gotten unhinged at this point—and I think that we can say that the phrase “reasonably well contained” is okay—there is a greater risk that they could get unhinged. Now, I want to be clear. I'm not talking about the 1970s. It's not “That '70s Show.” I have not been particularly happy with Allan Meltzer's comments about a bunch of things. The issue here is not that inflation expectations would go to that kind of level, but it could be that inflation expectations go up to 2½ or maybe even a little higher and it would be costly to get that down. That's the concern we have to worry about.

But let me talk about the other side because, when I think about the inflation dynamics, it's not just inflation expectations. I do not believe in the *deus ex machina* view of the inflation process. Something has to tie things down, and what ties it down is not current output gaps—which is why I think the standard Phillips curves don't predict very well—but expectations about future output gaps. On that score, I worry that there could be a lot of downside risk to inflation from that. If really bad things happen, which I think unfortunately is a serious possibility, inflation could fall. A key fact, by the way, is that if you look at past recessions, you do find that inflation falls in the 12 months after recessions. In a couple of cases with supply shocks, there was a rise in inflation at the

beginning of the recessions. Seven out of eight are in that category. Particularly if it's a severe recession, it's much more likely for inflation to fall. So it's not true that there's just upside risk; there is downside risk as well, and that's one reason that inflation uncertainty is not an issue just of potential upside. In fact, in the 2003 episode that President Lacker mentioned, the reason there was such a sharp rise in inflation compensation was not that people worried about inflation going up but that they worried that inflation would go down. Nonetheless, there's still a cost to the fact that long-run inflation expectations are not as solidly grounded as they were before. So my view in general is that we are facing an incredibly unpleasant tradeoff. We basically have the risk of the economy turning very sharply and the risk of inflation getting somewhat unhinged. I want to discuss that later.

I wasn't going to discuss this, but I just really can't not react to the comments that you made, President Fisher. There's a view out there in the media that monetary policy has been ineffective. This was the statement that I think you made, and I think it is just plain wrong. So I want to discuss it because it's actually really important in thinking about a policy stance right now, and it's important to think about the economics of this. We have had a very nasty set of contractionary shocks from the financial sector, particularly the widening of credit spreads and the restriction of credit. So I want us to think about a counterfactual. Let's think about a situation in which we had what's happened and we did not lower interest rates. What would have been the outcome? Do you think that credit spreads would have lowered? I think credit spreads would have risen. In fact, when you think about what credit spreads are being driven by—I've argued this before—there's a valuation risk—the fact that we can't value assets, and that's this price discovery problem that we really can't do that much about. But there is also a macroeconomic risk, which is a lot of what's going on right now, particularly in terms of the housing market where people don't



know where housing prices are going to bottom out. The view that they may keep on going down—and we had a very negative number on housing prices recently—means that even the AAA tranches now look as though they're very vulnerable, and therefore, the credit spreads on them go up a whole lot. My view is that monetary policy has been very effective because things would be much, much worse if we hadn't eased. On the other hand, we just had an incredibly nasty set of shocks as a result of what you described were the problems in these sectors.

So I really think that this is very important. To finish up on this, the example of Japan is constructive because the Bank of Japan had a view very similar to the one that you've expressed, which is that they had all these problems in the banking sector, and the problems were not their fault. But they then took the view that they couldn't do anything about it. Monetary policy was not the source of the weak economy, so they were very slow to lower interest rates. The Chairman has talked about this. Every monetary economist who went to the Bank of Japan during this period—I did it when I was with the New York Fed in the mid-1990s—told them that their monetary policy was too tight. They basically said, “Well, you know, it's not too tight, and it's not our fault that the banks are all screwed up because of poor regulation.” Well, the result was they ended up with deflation, and they lost ten years of growth. I'm being a little more blunt than usual, but I think that the economic arguments here are actually central in our discussion.

MR. FISHER. Mr. Chairman, may I answer?

CHAIRMAN BERNANKE. Well, let him finish. Are you done?

MR. MISHKIN. I am done, yes.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. Just very quickly, I said that the liquidity situation we're in diminishes the efficacy of fed funds policy; I'm not saying it's not a worthwhile tool. Second, I was fully

supportive until we got to 3.5. Then we went from 3.5 to 3 percent. Everything we wanted to go one way then went the opposite way. So I just made the observation that it didn't seem to be effective. Third, I think I spent even more time in Japan than President Geithner, who is an expert on Japan, and you cannot compare the two economies. They are geared totally differently, with totally different efficiency. I'd be happy to debate that at a later point. I think it's a very poor analogy. Now, having said that, I respect the enormous macroeconomic downside risk that we have—and I have one of the most pessimistic forecasts—but there's a price to be paid for what we're doing unless it is efficient, and that price is reflected in inflation expectations. That's my point, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN GEITHNER. Mr. Chairman, I'm going to cede all of my time to you, except to acknowledge and to point out that there's much I agree with that has been said around the table, particularly with how people characterize the growth outlook and the risks and what's happening in financial markets and to the outlook. I can't say that stuff better than it has been said. But there's much I disagree with in what's been said, particularly on the inflation side, about the lack of credibility.

I just want very quickly to say a couple of things about how we talk about this stuff based on what's been said. First, some of you at this table may believe that we are losing credibility, and you may be losing confidence in the capacity of this Committee to mitigate the risk to our long-term inflation objectives. If you say that in public, you will magnify that problem, and just because you believe it does not make it true. I believe that you should have more confidence in the commitment of this Committee to do what is necessary to keep those expectations stable over time. Second, the stuff about capital and the financial system is very, very important. It is very hard to make the

judgment now that the financial system as a whole or the banking system as a whole is undercapitalized. Some people out there are saying that. In some states of the world, particularly if there is no liquidity, then any financial system will be systematically insolvent. But based on everything we know today, if you look at very pessimistic estimates of the scale of losses across the financial system, on average relative to capital, they do not justify that concern. It is very important to make distinctions in what we say about that. It is very different to say that their distribution is uneven and to say that for some institutions those losses may be large relative to capital. That is obviously the case; we have already seen that to be the case. It is important to make the distinction between the average and the distribution. Although the average losses look relatively manageable relative to capital, the system is short of capital relative to what would be ideal, given that we've had the collapse of a very large part of the nonbank financial system. Banks as a whole are not large enough now, even with their capital cushions, to compensate for the scale of disintermediation of that type of nonbank finance. Those are very important distinctions to make in this case.

There is nothing more dangerous in what we're facing now than for people who are knowledgeable about this stuff to feed these broad concerns about our credibility and about the basic core strength of the financial system. So I just want to underscore the importance of exceptional care in how we talk about those things, even in private. A lot of people out there who should know better—none of us is guilty of this—are casting broad aspersions about solvency that are very dangerous in this context. May we get to the point where those concerns are justified? Of course we may get to that point. If we systematically mismanage policy, we may get to that point. But please be careful in that context.

I'm sorry, Mr. Chairman. I meant to cede all my time to you. [Laughter] Finally, I have to state for the record that I did submit our forecast. To state the obvious, it's close enough to the

Greenbook on most things, and, given the range of uncertainty, there's no material between our view and the Greenbook's.

CHAIRMAN BERNANKE. Thank you very much. Thank you for all of your comments. Let me just briefly summarize and add a few points. To summarize the discussion, incoming data have been weak, and some view the economy as having entered recession. Housing demand and construction have continued to decline sharply, and house-price declines have been somewhat greater than expected. Housing weakness has implications for employment, for consumer spending, and for credit conditions. It also leads to 21 miles of empty boxcars. [Laughter]

Financial conditions have worsened considerably, reflecting weakness in housing prices, and credit markets in particular are highly stressed and illiquid. Wider spreads have offset some or all of the decline in safe rates for many credit products, and credit conditions are tighter for most borrowers. Financial conditions are likely to be a significant drag on economic growth. Some noted the risk that continued financial turmoil could lead to a more serious and prolonged recession, implying possibly large downside risk to growth. With respect to households, consumption growth has flattened out, and there was generally greater pessimism about the labor market and economic prospects. Consumer credit quality may be worsening. Payroll employment growth has turned negative. There was little expectation expressed of strong help from the fiscal stimulus package. Firms are generally more pessimistic and cautious but also remain concerned about cost pressures. Inventories look to be in balance. Exports continue to be an important source of final demand and will continue to contribute significantly to growth, although it's possible that growth abroad may slow.

Readings on core inflation have been mixed. Increases in energy and commodity prices are important sources of increased headline inflation, and some producers have adopted a cost-plus

mentality. Agricultural prices, in particular, are up a good bit. Inflation breakevens are up somewhat, especially at the five-by-five horizon. The dollar has depreciated, potentially adding to longer-term inflation pressures and adding some risks. However, nominal wage increases are moderate, as are unit labor costs, and U.S. and global economic weakness could moderate gains in commodity prices and create domestic economic slack. Several members warned about the risk of losing inflation credibility. Any comments, thoughts?

Let me make just a few comments. Again, I'm very sympathetic to what almost everyone has said around the table, in particular the fact that we're facing a three-front war, if you will, which makes this extraordinarily difficult and delicate. I thought in January that we were in recession. That was my view at that time, and I certainly believe it now. The Greenbook has done a good job of trying to factor in the data and the other types of evidence. I think I'm actually slightly darker on growth than the Greenbook is. The reason is that I don't see where the recovery is coming from in the beginning of next year. In particular, we won't have a recovery until financial markets stabilize, and the financial markets won't stabilize until house prices stabilize, and there is simply no particular reason to choose a time for that to happen. So I do think that the downside risks are quite significant and that this so-called adverse feedback loop is currently in full play. At some point, of course, either things will stabilize or there will be some kind of massive governmental intervention, but I just don't have much confidence about the timing of that.

I would like to say a word. I would just agree with Governor Mishkin about the efficacy of our policy. I think that it has had an effect and it has been beneficial. We obviously affect short-term rates, including commercial paper rates and the like, which have implications for financing and for borrowing. We affect the dollar, which has mixed effects, but on the growth side has some positive effects. It's true, as President Fisher pointed out, that medium-term and long-term rates

have not fallen because lower Treasury rates have been offset by higher spreads, but again, the question is the counterfactual. Where would we be if we had not lowered rates? I think that lower rates have both lowered safe rates and offset to some extent the rising concerns about solvency, which have caused the credit spreads to widen. I think this argument can go either way. You can say that our policy is less effective and, therefore, we should do more of it. So there are two ways of looking at that. In addition, there may be some benefits for capital formation of low financing rates and a steep yield curve in keeping bank share prices from entirely collapsing.

On inflation, I agree with much of what's been said, and I'm very concerned about it. Let me make one simple point, though, which I don't think has been adequately discussed. Ninety-five percent of the inflation that we're seeing is either the direct or the indirect effect of globally traded commodity prices—food, energy, and other commodities. What is happening is that there is a change in the relative price of, say, oil and the wage of an Ohio manufacturing worker. There's a relative price change going on. That has to happen one way or the other. It can happen either by overall increases in the nominal price of oil, which are reflected in overall increases in headline CPI inflation, or by lower or negative growth in nominal wages. Now, if we have temporary movements in these relative prices, I think all the theory tells us that the best way to let that relative price change happen is to let the shock feed through; let the prices of energy, commodities, and so on rise; accept a temporary increase in headline inflation; and focus on making sure that the increase in headline inflation doesn't feed through into domestic core inflation, say, through wages or domestic prices. A good response to that is, well, we've had a lot of "temporary" shocks here and they have gone on for a long time. That's certainly true. But again, it was very difficult to anticipate how these prices have moved.

Looking forward, the futures markets have been wrong and wrong, but they are the best we have. In my view, if we think about the likely slowdown in the U.S. economy and the global economy, there are going to be some forces that will prevent commodity prices from continuing to rise the way they have been rising, which ought to take the pressure off the inflation process. That being said, I fully recognize that there has been a bit of movement in some of the indicators. I think I like the use of the index measure. It uses lots of different indicators. I don't think we should overemphasize inflation compensation. For example, the one-year inflation compensation three and four years out has moved up less than the five-by-five, and I think for good reasons. The five-by-five could reflect, again, general uncertainty. It could also reflect more volatility in the relative price changes of oil, for example. If we think there's more volatility in that, if it's up or down, that would create more uncertainty about headline inflation and would feed through into that spread.

Frankly, in thinking about inflation, I am concerned about inflation expectations and the general psychology. I'm hopeful at least that it will moderate as commodity prices moderate although, of course, no one can know for sure. I agree with Governor Warsh that, from a financial perspective on the inflation side, the greater dangers are in the currency area. Exchange rates are very poorly tied down by fundamentals, except over very long periods of time—I think Ken Rogoff had a paper in which he said that over maybe 600 years or so the PPP finally works. [Laughter] So a lot of psychology is there. I think that it is an important issue. We need to think about what the Treasury will say and those sorts of things. That is a concern, and I consider that in some sense a greater risk at this point.

So there are risks on both sides. I think that the downside risks, including the financial risks, at this point are greater—not to belittle inflation risks, which I think are quite significant. We are obviously going to have to make tradeoffs about how to deal with these. Using both our policy

tools and our communication is very important. I agree with Vice Chairman Geithner that we need and I need—and I have a very important role here—to maintain clarity in communication about our attention to inflation, that we are not ignoring that side of the mandate.

Finally, let me just say, as I said last night at the dinner with the presidents, that I think we are getting to the point where the Federal Reserve's tools, both its liquidity tools and its interest rate tools, are not by themselves sufficient to resolve our troubles. More help, more activity, from the Congress and the Administration to address housing issues, for example, would be desirable. We are certainly working on those issues here at the Board, and I will be talking to people in Washington about what might be done to try to address more fundamentally these issues of the housing market and the financial markets. So those are my comments. Why don't we turn now to Brian for an introduction to the policy round.

MR. MADIGAN.<sup>2</sup> Thanks, Mr. Chairman. I will be referring to the revised version of table 1 distributed earlier today in the package labeled "Material for FOMC Briefing on Monetary Policy Alternatives." The revised table presents the same basic set of alternatives that was discussed in the Bluebook. However, we have proposed some changes in language that affect the statements for alternatives A and B. I will discuss those changes, shown in blue, shortly.

Alternative D, presented in the right-hand column, would leave the federal funds rate unchanged at this meeting at 3 percent. Committee members might be inclined to favor this alternative if they were particularly concerned about prospects for inflation and if they believed that, with due allowance for lags, the monetary and fiscal stimulus in train would likely be sufficient to lead to a resumption of moderate growth over time. The wording of this alternative would acknowledge the downside risks to growth. But as shown in paragraph 3, the statement would indicate that inflation has been elevated, cite several factors that could put additional upward pressure on inflation, and state that the upside risks to inflation have increased. No net assessment of the balance of risks would be included.

Under alternative C, the stance of policy would be eased by 25 basis points today. A modest easing of policy might be motivated by judgments that the economic outlook has weakened, but by appreciably less than in the Greenbook, and that the inflation outlook is troubling. Members might see financial strains as concerning but likely to exert less restraint on growth than in the Greenbook forecast.

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<sup>2</sup> The materials used by Mr. Madigan are appended to this transcript (appendix 2).



In these circumstances, the Committee might want to be cautious about policy adjustments that could add impetus to inflation, particularly given the substantial easing of monetary policy to date and the lags in the effects of policy. The language proposed for alternative C would note that the tightening of credit conditions and the deepening of the housing correction are likely to continue to weigh on economic growth. The inflation paragraph for this alternative is the same as that for alternative D. As shown in paragraph 4, the Committee would make an explicit judgment that the downside risks to growth outweigh the upside risks to inflation.

Under alternative B, the Committee would reduce the federal funds rate 50 basis points today, to 2½ percent. Such an approach could be seen as consistent with the Greenbook forecast. Indeed, under that forecast, the Committee is assumed to ease policy 50 basis points at this meeting and another 75 basis points over the next three months. The motivation for such a trajectory is provided partly by the 1¼ percentage point downward revision to the Greenbook-consistent measure of short-run  $r^*$ . The Committee might concur with the staff's assumption regarding the amount of cumulative easing that will eventually prove necessary and find a gradual shift in policy attractive, particularly in view of what seems to be some upward drift of late in inflation expectations. Such a path would also be qualitatively consistent with the optimal control simulations shown in the Bluebook for a 2 percent inflation target, in which the federal funds rate is eventually eased to around 1¼ percent. As shown in paragraph 2, the statement issued under this alternative would indicate that the outlook had weakened. We have suggested striking the reference to risks as that thought is picked up in the risk assessment. The statement would go on to mention several factors that could weigh on economic growth, and we have suggested adding "over the next few quarters."

With regard to inflation, the Committee would note that inflation has been elevated. It would also indicate an expectation that inflation will moderate in coming months and cite several factors that could contribute to that moderation but note that uncertainty about the inflation outlook has increased. Notably, the list does not mention "reasonably well anchored inflation expectations" or some variant of that phrase, which has been used recently in the minutes and other policy communications. Indeed, the first sentence of the paragraph notes that some indicators of inflation expectations have risen. Partly because inflation compensation includes a premium for inflation risk as well as inflation expectations, we thought that "indicators" of inflation expectations might be a better word than "measures" and have suggested that substitution. Over the past few days, inflation compensation as read from TIPS has plunged; however, we are skeptical that the decline represents primarily a drop in inflation expectations or inflation risk. Rather, we suspect that it is importantly a result of shifting liquidity premiums, as yields on nominal Treasury securities have fallen sharply partly because of increased demands for safety and liquidity. The final paragraph of alternative B would repeat the risk assessment issued after the January meeting. It would again indicate that downside risks remain and emphasize that the Committee will act in a timely manner to address those risks.

Finally, under alternative A the Committee would lower the funds rate 75 basis points today. Given the extent of policy easing assumed in the staff forecast, this alternative could easily be consistent with an outlook along the lines of the Greenbook. This policy approach could also be motivated by concern about the possible implications for the economic outlook of the worsening in financial market conditions in the five days since the staff forecast was finalized or by a risk-management approach that gave particular weight to the downside risks around the outlook.

The language proposed for the rationale section, paragraphs 2 and 3, of alternative A is identical to that proposed for alternative B. As with alternative B, the risk assessment paragraph says that policy actions should promote moderate growth over time and mitigate downside risks, but this version also alludes to the measures that the Federal Reserve has implemented to promote market liquidity. This language could also be used in alternative B. Rather than providing an assessment of the balance of risks, as we did in the Bluebook version, here in alternative A we have suggested simply indicating that downside risks to growth remain. Given the high degree of uncertainty, you might again prefer not to make an overall risk assessment. This paragraph differs from the corresponding part of the January statement also by indicating that the Committee will act in a timely manner as needed to promote sustainable economic growth and price stability. Thus, while the Committee eases 75 basis points, this language of alternative A would signal some increase in the Committee's concern about inflation in several ways: by indicating that inflation has been elevated; by noting that some indicators of inflation expectations have risen; and by incorporating a traditional formulation of the dual objectives, including price stability, in the final sentence.

As Bill noted this morning, market participants appear to place substantial odds on a 100 basis point policy move at this meeting. Thus, implementation of any of these alternatives would involve at least somewhat less easing than expected. Given what would appear to be very fragile market conditions and highly skittish investor sentiment, you might see somewhat greater risks than usual in diverging from market expectations, and obviously the risks would be larger the greater the gap between anticipation and your actions. At the same time, you might see good reasons for some divergence. First and most obviously, you might see a smaller move as appropriately calibrated given your outlook and sense of the risks. Also, some indicators do seem to suggest that inflation expectations have become a bit less firmly moored. Even if you see gradual dollar depreciation as likely to be appropriate given the weakness of the U.S. economy and quite possibly a necessary factor in fostering an improved current account balance over time, you may be concerned about the downward lurch in the dollar over recent days and the potential for disorderly conditions to develop. You may judge that a policy decision today to implement somewhat less easing than markets expect and a statement that implies somewhat greater concern about inflation could be helpful in leaning against inflation expectations and any sense in markets that you are indifferent to downward pressure on the dollar.

Alternative A would likely prompt some increase in shorter-term interest rates; but given that the risk assessment would point to continued downside risks, market participants would infer that further easing is a likely prospect, and the effects on other financial asset prices and financial conditions more generally could be reasonably limited. The 50 basis point easing of alternative B, in contrast, would suggest to market participants that you are inclined to be considerably more cautious in easing policy further, even with the downside risk assessment, and short- and intermediate-term interest rates could ratchet considerably higher, equity prices decline, and credit conditions tighten—responses that presumably would be amplified, perhaps nonlinearly, under alternatives C and D.

CHAIRMAN BERNANKE. Thank you. Bill.

MR. DUDLEY. I just want to update the dealer survey. We got two more responses. Two people moved from 75 to 100. So right now as we speak, it is ten in the 100 camp, eight in the 75 camp, and two in the 50 camp.

CHAIRMAN BERNANKE. Okay. Thank you. Questions? Vice Chairman.

VICE CHAIRMAN GEITHNER. Mr. Chairman, it is kind of awkward to ask this in the midst of a meeting, but I think it is important. I think there was a pretty big change this morning at least in risk perceptions today across a bunch of markets. Can you tell what the fed funds curve has done this morning?

MR. DUDLEY. I think that the April fed funds futures contract earlier this morning was priced at 1.99, and it was up by 4 basis points. I don't know if it moved subsequently.

MR. MADIGAN. Vice Chairman, it has moved up somewhat further at least as of maybe an hour ago. It looked as though, at least for this meeting, the odds were roughly evenly balanced between 75 and 100, in terms of what was priced in.

MR. DUDLEY. Stocks are up about 2 percent. Both Lehman's and Goldman's earnings showed declines, but they were less significant than expected. So share prices for both of them have

rallied a lot. Lehman's stock was up 19 percent when I last looked—I don't know where it is today. So a lot of reversals occurred yesterday in terms of the investment banks.

VICE CHAIRMAN GEITHNER. Financial credit default swaps this morning are much, much narrower. May I raise a conceptual question around this, though? Maybe this is really for you, Mr. Chairman. How should we think about the tradeoff between what we do with the fed funds rate and whatever effect we have on liquidity and credit spreads, which are obviously in some ways working against the reduction of the fed funds rate? It doesn't seem to me quite right to say that they are perfect tradeoffs.

CHAIRMAN BERNANKE. No.

VICE CHAIRMAN GEITHNER. I guess my question is, Don't they have independent effects? I mean, they are separate and somewhat different in terms of how we think about mitigating the risk to the overall economy.

CHAIRMAN BERNANKE. I would think of them as complementary—they are not strong substitutes, obviously—in the sense that, as is often pointed out, the liquidity measures can affect credit and solvency concerns.

VICE CHAIRMAN GEITHNER. So maybe to echo the dialogue that you had with Governor Mishkin, if we were to be successful through taking out some of the liquidity risk of markets more generally and we got those spreads maybe back down to—I don't know—50, in a crude proxy sense, that would be good and powerful but we would still be left with exceptionally tight financial conditions relative to the given target fed funds rate. Is that fair? I mangled that.

MR. MISHKIN. Yes. I'm not arguing that lowering the federal funds rate narrows these spreads a whole lot. It certainly works in that direction, but there is a big independent movement because of both fear in the markets and some liquidity concerns, which is why I think it is very

important for us to have both sets of tools. We have tools that can work on the issue of expectations about monetary policy and stance, but to the extent that we can use other tools, that's also extremely helpful. It is not that we think we can solve all the problems, particularly because these shocks are so large. This is one problem that we are facing, which is that this disruption is really big, big time. So then the question is whether we want to use all the tools at our disposal that we can.

CHAIRMAN BERNANKE. Brian.

MR. MADIGAN. I just want to make one point to the Vice Chairman's question. The way I think about this is that monetary policy tends to move continuously. Of course, the federal funds rate is essentially continuous, but what we are doing with liquidity measures is designed to combat nonlinearities to the extent that they're discontinuities, and so I think they have a different qualitative feel. We're attempting to prevent a breakdown in markets and allow monetary policy thereby to operate more normally in a more continuous way.

VICE CHAIRMAN GEITHNER. I guess another way to frame the question is, If we are reasonably successful in mitigating this adverse feedback dynamic in markets and the effects that has on financial conditions, would we still need to lower the nominal fed funds rate further to achieve the forecast laid out in the Board staff's Greenbook?

MR. STOCKTON. The answer to that would be "yes." When we layered on significant additional negative add-factors for this recession scenario, they really weren't directly tied to our reading of liquidity in financial markets but a reading of the real economy.

CHAIRMAN BERNANKE. Governor Mishkin.

MR. MISHKIN. I think the issue here relates to the whole question about nongradualism that we've been talking about. Clearly, if we got lucky and financial markets turned around in a major way, then the stance of monetary policy would need to change, actually very rapidly. This is

one of the issues facing us—a communication issue, which is how we indicate to the markets and the public in a serious way that we really care about keeping inflation under control. I'm not sure what the answer to that is. It is one of the great challenges that we're facing at this particular juncture. Clearly, part of it is that we don't want interest rates to be particularly low. In fact, the higher interest rates could be for us, the happier we would be because that would be an indication that financial conditions had turned around a lot. However, the problem, of course, is that inflation expectations get unhinged.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. Mr. Chairman, Vice Chairman Geithner is asking in an elegant way about the issue of efficacy, which I was trying to touch on and did so in a less sophisticated way. I just want to make sure that I understand your answer. If we were to achieve the degree of success that Tim roughly estimated, we would lessen that pressure. From a staff standpoint, what degree of easing would you advocate? Would it be a lesser degree than what is imputed into the—

MR. STOCKTON. I can't really answer that question. Over this intermeeting period, we were coping with two important developments. One was that we saw some increase in overall measures of financial stress. As you know, we went to a forecast back in September when they first emerged and started marking down the level of GDP to account for that. We did a little more in this forecast to account for what we perceived to be an increase in financial stress. But the bigger factor in marking down our forecasts significantly this year was a reading that we were switching from a sense of a slow-growth scenario and moving into something like a more nonlinear downturn of the economy. That motivated the more significant portion of the downward movement that we had in the equilibrium real interest rate here.

CHAIRMAN BERNANKE. Okay. President Evans.

MR. EVANS. Well, I just want to clarify this because I didn't get the answer I was expecting. I don't think I understood exactly the question about financial stress because I thought the question was whether we would have to do more with the funds rate to achieve what was in the Greenbook. Did you mark down your outlook from the Greenbook? I don't think I understood.

MR. STOCKTON. I guess I was thinking more along the marginal change that we would make should the factors be more successful than we're currently anticipating them to be. That would probably cause us to edge up our path of the fed funds rate to account for that.

MR. EVANS. Okay. Got it. Thanks.

CHAIRMAN BERNANKE. Any other questions for Brian? With your indulgence, it has been a very volatile period with a lot of changes in views. We're also a little short of time. I think it might be more focused if I gave a proposal and had people react to it. President Plosser made the correct point that we need to think about the level of the funds rate. Where should it be? I think it needs to be lower, frankly. In our last meeting, at 3 percent, many of us viewed that as about neutral without much insurance. Since then we've seen, I believe, a much stronger indication of recession, an increase in downside risks. When I spoke about the downside risks in the Congress and in speeches, I cited three categories of risks: housing, finance, and labor markets. All of those have transpired in that direction. So I do think we have to respond effectively against that. For that reason I would recommend the 75 basis point reduction. I recognize the concerns people have, and I have them myself, about both inflation and the dollar. So I would make two comments regarding that. First, we will be even now disappointing the market somewhat. A more aggressive ease is built in. Second, as Brian already indicated, in a number of places in alternative A, which I am proposing, we have ratcheted up the language about inflation, notably in paragraph 3, where we talk

about it being elevated and inflation expectations, and in the last sentence, where we reinstitute price stability and clarify what our dual mandate is.

Minor comments: I'm open to anything, but I point out that in paragraph 3 we added the list of explanations for why inflation may moderate. We didn't have that last time. If people are uncomfortable with that, we can take that out. The other thing we added in paragraph 4 was the comment about market liquidity measures. I think that's useful. It shows that we're doing other things. It creates a sense that there's more going on besides monetary policy. But again, if people have strong objections, I have no strong feelings about that. In addition, my recommendation would include maintaining the discount rate difference of  $\frac{1}{4}$  percentage point that we established on Sunday. So that's where I would be. Why don't we now have a rapid go-round? President Hoenig.

MR. HOENIG. Mr. Chairman, I think this is a mistake. I want to take just a second. I understand why we've been lowering the rate, trying to keep the problems from spreading over to the real economy. I've been reluctant because our practice has been to go too low and to create a new set of circumstances that we have to deal with although I've understood, given the seriousness of this financial crisis, that we've had to go down. I have been and continue to be very supportive of the use of our TAF and our other vehicles to provide liquidity to the market to help address and stanch the panic. The fact of the matter is, though, that there is an enormous amount of loss. Whether there is enough capital in the banking industry, we know that there is a solvency issue out there, and these actions, while they provide liquidity, cannot solve that problem. That's where fiscal policy goes. But I'm not sure that our continuing to lower rates isn't allowing others who should be addressing this to look to us to solve the problem that is not ours to solve, and that concerns me about where we are.



The fed funds rate at 3 percent nominal, I think, is a stimulative rate in terms of where the real fed funds rate is. In an environment where we now move down even lower than that, we are inviting other speculative activities. Liquidity has to go somewhere, and it is going there fast. I think there's a danger in doing that, and this 3 percent will stimulate the economy forward. Two and a quarter will stimulate the economy forward and introduce other significant risks both to speculative activity and to inflation, and that's why I think we should be more careful in going forward. Now, doing nothing will shock the market, but I'll tell you that the market has been shocked as much by some of the new actions we have taken as if we said, "Here it is at 3 percent." There are a lot of people on the sidelines waiting for us to stop so that they can come in and take advantage of the situation. So there are lots of reasons that I would much prefer to hold at this period, and I felt compelled to express that view. Thank you.

CHAIRMAN BERNANKE. Certainly. President Rosengren.

MR. ROSENGREN. News of the problems at Bear Stearns and the very fragile situation in financial markets complicate our decision today. Federal funds futures indicate that the market is anticipating a reduction of at least 75 basis points and probably more than that. Normally the expectations of financial market participants would not factor heavily in my decisionmaking. However, given the fragility in the market and my own expectation that, even with this move, further easing will be necessary, I strongly prefer alternative A. While I view alternative B as a significant action, I would have concerns about likely market reaction given the gravity of the situation in financial markets and the possibility that a recession may not be mild, given falling collateral values and financial difficulties at many of our major financial institutions. A 50 basis point move would merely offset the increase in credit spreads that we have seen since the past meeting. In addition, the Boston forecast and the Greenbook forecast with a 50 basis point ease

leave the unemployment rate well above the NAIRU but with inflation rates below 2 percent by the end of 2009. Easing less than 50 basis points at this meeting would seem entirely inconsistent with the economic and financial deterioration we have seen since the last meeting.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. We've spoken a lot about inflation expectations here today. Let me at the outset emphasize that what I'm referring to in the measures we have are the expectations of the public. They're not necessarily my expectations or Governor Mishkin's, Vice Chairman Geithner's, or the Committee's, and they don't necessarily correspond to the reality of the distribution of inflation realized five years, five years hence, if each of us had our druthers or if the Committee as a whole lasted that long together and conducted policy the way it best saw fit. I trust that no member would deliberately encourage continued discrepancy between what they viewed as objective reality and the public's expectations. But that said, that discrepancy is not the same as less commitment on our part. It's certainly the same as less credibility about commitment on our part. I think and trust that most members when speaking in public about inflation expectations would endeavor to reduce that discrepancy. Presumably, each of us has a threshold for acceptable inflation expectations that, if it were crossed, would induce us to be willing to disappoint market expectations. Personally, my threshold has been crossed, so I think that, if we ease, we should ease much less aggressively than markets expect.

More broadly, I think of this in terms of the following question: What strategy would we want people to believe we will follow in future episodes like this? As I pointed out in my letter to the Committee last week, thinking in terms of our strategy is different from a meeting-by-meeting approach that takes the public's current expectations, wherever they are, as given. We should ask, I believe, what expectations we would have wanted them to have had about our behavior during

episodes like this. Do we want people to believe that we will follow a policy that allows inflation and inflation expectations to ratchet up permanently whenever growth slows? I don't think so, but that seems to be what the market believes we're doing. Conceivably, we could try to use our statements and minutes to communicate our intention to bring inflation down, but at this point, my sense is that our statements about inflation appear to be taken as much less revealing than our actions.

This is a uniquely challenging episode in the history of our economy and our institution. I have found it useful to remind myself from time to time about the limits of central banking. We cannot prevent this recession, and it's doubtful to me that we could have or should have even if we had had perfect foresight. We are unlikely, as I said, to have much effect on the ultimate magnitude of mortgage losses at this point, and I don't think we can do much to accelerate the resolution of uncertainty about those losses. We cannot resolve uncertainty about the fundamentals underlying the creditworthiness of financial market counterparties, and we cannot enhance the liquidity of any financial instrument without altering its relative price. What can we do? We can control inflation, and we can limit the extent to which uncertainty about our inflation intentions adds to market volatility. To do this, I like the idea of being clear about our strategy. I take that as consistent with what President Plosser was advocating, that we concern ourselves with what level we see as appropriate now and see as likely to be appropriate later this year. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I support your proposal for a 75 basis point cut and the language that's proposed for alternative A. As I said in my comments, I'm very concerned about economic growth and agree basically with the Greenbook perspective. I think we are into an adverse feedback loop, and I agree with the Bluebook assessment that the equilibrium real funds

rate has dropped substantially, maybe into negative territory. I don't believe in gradualism in circumstances like these. I think the argument for more-aggressive action now is similar to when inflation is very low and we face the zero bound for nominal interest rates. I agree with Governor Mishkin's comments about the lessons of Japan. I think that the sooner appropriate stimulus is put in place, the less likely it is that policy will end up facing very unpleasant consequences of essentially reaching the zero bound in this case because of a prolonged and severe recession. So I'd like to see the funds rate moved down to where it needs to go sooner rather than later.

I think the appropriate level of the funds rate is one that would provide some insurance against really bad outcomes for the economy, and I don't see this move as taking us into insurance territory yet. So I understand the constraints that you have weighed into this decision having to do with the psychology of inflation expectations and the dollar, and probably this is as far as we can go sensibly today, but I think it is important to move as much as we can.

If the moves prove unnecessary, I think we can reverse the stance of policy quickly, with a good chance of avoiding inflationary problems. I agree with Governor Mishkin's views on risk-management policy in the face of financial shocks. We had an interesting discussion last time about the possibility that a quick reversal might mean that we don't have much stimulative effect on spending now because we may not lower long-term interest rates enough, and I think that was good food for thought. But having spent some time thinking about it, I think that a lower funds rate will actually lower long-term rates, in part because, by reducing the probability of a financial crisis, we will bring risk premiums down, which will lower long-term rates. A lower funds rate will also be stimulative because a good deal depends on short- and intermediate-term rates. I think there are also a number of other ways in which short rates matter to spending through channels like raising

firms' profitability and cash flow and lowering the stress from ARM resets. So I strongly support the action that you recommend.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I also support your proposal, both the action and the language of alternative A. I think it's an appropriate response to the developing situation, and I do think that the language will help us on the inflation front. Let me elaborate a bit.

We've had a marked deterioration in the outlook, as everybody around the table has seen and has agreed with. I do think, as President Yellen and others have said, that a decline in the federal funds rate will be helpful in mitigating the recessionary tendencies in the economy. The decline of 75 basis points is not as much as the Greenbook  $r^*$  decline, but I think it's appropriate and reasonable to await more evidence about whether at some point we need to go further. The resulting real federal funds rate would be approximately zero using core inflation, and I think that's a reasonable place to be, given the weight of the constraining factors in the economic outlook, particularly from the credit markets. I use core in thinking about the real funds rate because I do think that even a zero real funds rate under these circumstances, at least for a time, will be consistent with inflation coming down as commodity prices level out and as resource utilization goes down.

I agree with Brian that there could be a bit of an adverse reaction in financial markets because it's not quite as much as they're expecting, but with that risk sentence in paragraph 4, it shouldn't be too bad. I do think it's consistent with heightened attention by the Committee to inflation and inflation expectations for the reasons you gave, Mr. Chairman. It's less than the market expects, and both paragraph 3 and paragraph 4 increase the attention to inflation and inflation risk. Thank you.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. I support your recommendation. I came in here thinking that I preferred 50 basis points, but I also recognize that I expected that we would have to go beyond that after this meeting. So I fully support 75 and the language that you discussed.

I just want to take a minute to give my perspective on the discussion earlier about the 1970s and inflation expectations. I certainly didn't expect when I came onto the Committee that we would be lowering rates as much as we have done, and I thought we would be more concerned about inflation, but this is where we are, and I think it is the appropriate response. Inflation expectations risk reminds me of Paul Volcker, hero of the Federal Reserve System. Why is that? He broke inflation expectations. How did he do that? Well, when I talked with my colleague, Larry Christiano, he reminded me that it wasn't really by reducing money growth. M1 growth increased during that period, and yet financial conditions were restrictive. There was a big recession. There was a lot of resource slack, and that was really important for bringing inflation down.

I agree. I think we're in a situation where this is most likely a recession. I expect that it will reduce pressures on inflation. That's my forecast. I think it's consistent with the earlier period, and it's hard to know exactly how much it will bring inflation down, but I think that it will lower inflation. The Greenbook is calling for a recession. They could be wrong, but we've been chasing them down the whole time, and I'd be very surprised if they were wrong.

I would like to know where the bottom of the funds rate cycle is. Like financial market participants who want to know what the value of their mortgage securities is, I'd like to know where the bottom of the funds rate is. But that is wholly unrealistic at this point. We just don't know. So I would be hopeful for eventually something like the Greenbook path assumption. But I support the recommendation. Combined with our separate attempts to relieve financial market stress, we have two prongs going, and that is very helpful. Thank you.

CHAIRMAN BERNANKE. Thank you. President Stern.

MR. STERN. Thank you, Mr. Chairman. Well, as somebody said recently, there are no altogether good choices. I strongly support the recommendation and the language that goes with it. A couple of weeks ago I thought the funds rate probably should go to 2½ percent. I got there basically by saying, well, given what I know about current conditions, the outlook, and everything, 3 percent is not a bad level. But there are a lot of things I don't know, and it's likely that some events are going to occur in the next couple of weeks or sometime in the future that may disturb things, and as a little insurance for that, 2½ would be a good idea. Well, those events—I'm talking about Bear Stearns and other disruptions—occurred sooner rather than later, so it seems to me that we need to go to 2½ and then ask ourselves whether we want some additional insurance. My answer to that is "yes." So I'm perfectly comfortable with taking the funds rate down ¾ percentage point now. Does it strike the appropriate balance between our concerns about financial conditions and the outlook, and inflation and inflation expectations on the other side? I don't know. But as I said at the outset of this, I don't know that there are any altogether good choices. I think this is about as good as we can do under these circumstances.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Well, Mr. Chairman, I don't like being obtuse and, being a people person, I don't like being unpopular. But I—

MR. MISHKIN. We're always going to love you, come on. [Laughter]

PARTICIPANT. We don't like being unpopular either.

PARTICIPANT. Happy birthday! [Laughter]

MR. FISHER. I just can't bring myself to go that far, Mr. Chairman. I listened very carefully to what was said at the table, and implicit in Tim's question to me was, Would you be

willing to do something? The answer is “yes,” but not as much as you’re suggesting. I try as hard as possible, even though I’ve made my living in financial markets, to ignore the reports that we were just given as we started this conversation because what we’re paid to do and what I believe is our duty and obligation to do is what’s right for the long-term interests of the economy.

I am more bearish now than before, and I was an outlier on the bearish side of economic growth. I’ve been at the lower end of the range, but I also believe that we have significant inflationary concerns. I have a further point to add to President Hoenig’s—I agree with his intervention. I think that, by being accommodative, we are encouraging others who have a role to play here—you mentioned them yourself, Mr. Chairman—to sit back and let us do the job. To me the combination of inflationary pressures, which I consider to be real, imputing into a much weaker economic growth scenario, which I have thought for a long time, means that we cannot do this job alone. The fact of the matter is that we have undertaken significant liquidity enhancement initiatives, and I think we’re going to have to do more, and I’ve been fully supportive of them, but I think 75 basis points, Mr. Chairman, is way too much. My thought is that it encourages the financial markets. They’re not going to be satisfied. I said this last time. It’s Jabba the Hutt. They will keep asking for more and more. We have to quit feeding them. I’m in a pizza mode, by the way, in this conversation. I do have a suggestion, however.

MR. MISHKIN. You mean Pizza the Hutt, not Jabba the Hutt. [Laughter]

MR. FISHER. Pizza the Hutt, that’s right. Vice Chairman Geithner made a very interesting point, and that was that we have to be very careful about how we talk about inflation and even saying what we think. What worries me about going down alternative A’s path, if that’s the wisdom of the Committee, is that the second paragraph says a little too much of what we think. It really says that we’re not done. If you want to say that, that’s fine; but it keeps hammering on, even



after 75 basis points, that things are soft, things are soft, things are soft. You may disagree with me on that, but I would suggest that we take out the justification reflecting, in paragraph 3, “a projected leveling out of energy and other commodities.” To me that’s a wing and a prayer, and you suggested that you might be willing to take it out. Were I you, advocating 75 basis points, acting as I think you are about to act, with one dissent, I would take that wing and a prayer language out of there.

Then I would suggest one other thing—in fact, I would ask for one other thing. In the very last sentence—“The Committee will act in a timely matter as needed to promote sustainable economic growth without sacrificing long-term price stability”—that’s really what we’re talking about on the upside and on the downside. So I would ask for that change because that’s really what we’re saying. You’re saying that we’re worried about the downside. We’re all worried about that, but we’re going to promote sustainable economic growth without sacrificing long-term price stability. Those are my suggestions, Mr. Chairman, and thank you for putting up with me.

CHAIRMAN BERNANKE. Always a pleasure. [Laughter] President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I came to the meeting preferring alternative B—50 basis points. I certainly can bring myself to support your proposal—75 basis points. I don’t view it as a fist pounder, but let me make the case for 50 basis points, at least as I think about it. First, I do think it is a movement that acknowledges financial instability and the growing real weakness. As I argued in my earlier remarks, it may set the scene for decoupling rate policy from liquidity actions if conditions allow. I think the action makes a minimal acknowledgement of inflation risk, and it may signal the view that lower rates can do only so much and that, best case, the market will have to proceed to sort out the market problems and, worst case, the fiscal authorities will have to deal with them. Although I am not a trained psychologist, let me

just propose that, in dealing with market psychology, there may be some value in appearing to firm up our rate-movement policy and to set one element in the fluid situation with greater fixity than it has been in recent weeks. That might generate the kind of firming dynamic and even help produce a turn in psychology. That's a lot to ask for simply 50 basis points, but I also prefer the language of alternative A to that of alternative B, and I think Brian said that you could conceivably apply alternative A language substantially to a 50 basis point cut. So in general I like that approach.

Thank you, Mr. Chairman

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. I support your recommendation. As I said earlier, I do see the risks to the Greenbook baseline as being skewed to the downside because of the absence of any signs of a bottoming out in the housing market. As others have mentioned, I am concerned about the risk that we will have a more protracted recession. At the same time, the short-term inflation environment has deteriorated. I am also concerned about inflation expectations becoming unanchored. As Governor Mishkin and others have said today, we face some very unpleasant tradeoffs; but in the end, I support being more aggressive in our policy actions today. I am hopeful that, as others have said, the language that we have added in paragraph 3 about inflation risks and a reminder in the assessment-of-risk paragraph about our dual mandate will be helpful in keeping inflation expectations from rising further. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. First Vice President Sapenaro.

MR. SAPENARO. Mr. Chairman, excluding for the moment the market's expectations of a significant downward policy move at this meeting, I have a strong preference for alternative D, like President Hoenig. I see widespread evidence that the upside risk to inflation

has increased appreciably, as evidenced by rapid money growth, a depreciating dollar, rising prices of energy and commodities traded on the world markets, and higher inflation compensation in bond markets. However, as we all know, the market does expect a significant reduction in the funds rate from this meeting, partly because of the state of the economy, partly because of the turbulence in the financial markets, and partly because of past statements and communications from Committee members. Consequently, under these conditions, I believe that a failure to accommodate much of this expectation would produce additional, major market turmoil. Hence, I was prepared to accept a 50 basis point reduction coming into the meeting and, with some trepidation, can accept a 75 basis point reduction. In my view, however, it would be desirable for the Committee's communications going forward to emphasize that we have not lost our zeal to fight inflation and that further rate cuts cannot solve solvency problems without unacceptable future inflation. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. As I mentioned in my first go-round, and like Rick, I have been terribly depressed on multiple dimensions about what is going on and have struggled mightily in trying to think about what appropriate policy is going forward and, as President Lacker suggested, about what our strategy is as we move forward. I certainly believe that easing of policy is appropriate in a weaker economy, and I have supported that. But as I alluded to earlier—and, Mr. Chairman, as you said—I do believe that a weaker economy does not mean that we continue to cut rates as long as the economy is weak. We need to calibrate the level of the funds rate; I think it is very important. I think the markets seem to have the expectation that it is the rate of change, not the level, that matters. That concerns me and feeds into some of the problems that we are facing. I won't elaborate any more about expectations,

which I mentioned before. But I would prefer actions as well as language that reinforced our commitment to price stability and a pause today in our rate cuts. I think that the language of alternative D would accomplish that. But I also believe that a more modest cut, combined with language such as that in alternative D, might accomplish the same thing. I am afraid that an aggressive move combined with the language that we have in A or B feeds the belief that we have placed aside our commitment to price stability and the expectation that we will continue to cut rates for the foreseeable future and that there is no bottom in sight.

We have talked a lot about taking out insurance around this table. I believe the time has come to buy some insurance against our waning credibility about restraining inflation. That does not mean that we couldn't choose to continue to make rate cuts at some future date, should that be called for. Ultimately, if we wish inflation expectations to be well anchored, we must act in a way that is consistent with such an outcome. Words are simply not enough. Reputational capital, whether it be for a central bank, an academic institution, or the brand capital of a firm, is very hard to build. But most of us know, in the private sector and in other sectors, that capital can be easily squandered. We must not let that happen.

I appreciate, Mr. Chairman, your comments regarding the idea that we may be reaching the limits of what monetary policy and the central bank can do. I very much agree with that. At the risk of maybe sounding a bit trite to some of my colleagues who are familiar with this—I don't mean it that way because this expresses some of my concerns—I would like to remind my colleagues of a quotation of Milton Friedman, which he made in 1968, that “we are in danger of assigning to monetary policy a larger role than it can perform, in danger of asking it to accomplish tasks that it cannot achieve, and, as a result, in danger of preventing it from making the contribution that it is capable of making.” Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. A couple of quick introductory points. First, I have total confidence in the Fed and the FOMC, certainly over the course of my couple of years here, in effectively handling these challenges, which is key to highlight at the outset of my remarks. I have total confidence in this institution's ability, in particular, to handle both sides of the dual mandate. Moreover, I would say that I have total confidence in our ability to have a really robust discussion here and recognize, as President Geithner pointed out, the fragility in these financial markets. A lot of our strength comes from being able to have very open, tough discussions with each other and recognize that, if they were in the public square, they could be misinterpreted and destabilizing. I think he is right that we all need to take that into account, particularly over this next intermeeting period, which we all hope lasts six weeks. Moreover, I think that the power of our tools, our creativity, and our innovative abilities over November, December, and these recent weeks has been incredibly impressive. I think that those will work in concert with monetary policy. I would underscore a point that the Chairman made, which is that we have taken a huge burden on ourselves and that the burden will have to be matched by others here in Washington—and I suspect before we get too much into the second and third quarter by others around the world—which will go a long way toward helping us accomplish our objectives.

Second, I have total confidence in U.S. financial institutions over the medium term to deal with these issues. They will come out of this thing stronger, smarter, and faster and will be huge net exporters of services, but that is going to take a while. My own view is that the capital-raising is good and very important. If the tail is as fat as we have discussed, capital-raising by

these institutions should help them stave off safety and soundness issues that could arise. So I think that it is good prudential management by them and us alike.

To the task at hand on monetary policy, I will support alternative A, as the Chairman recommends, and I take particular comfort in the narrative and language in A as being a very important next step for us to guard against risks on the currency front and on the inflation front. Now, these words themselves won't do a ton in the short term, and they won't have an immediate effect, but I do think it is important for us to take these and build on them in our private and public statements. So that gives me some comfort. On the decision of 50 points versus 75 points, I would be kidding myself if I thought that those 25 basis points were completely consequential. I wouldn't ascribe virtue or vice to that sort of bid-asked spread. I would say that it is a hard call. I share the view expressed by some that these markets are going to need to be disappointed at some point here. That is the only way the words that we express will be properly understood and taken into account in the markets' judgments, and I worry that we are not going to have any great opportunities to disappoint them over the course of the upcoming meetings.

Finally, let me say this. I will end where I started in this discussion, which is, at the end of the day, it is this institution's credibility that is paramount and that is increasingly the case at this point in the cycle. It strikes me that we have to continue to make the case in the upcoming months that we have the will, the wisdom, and the tools to tackle these issues. To the extent that monetary policy is perceived by pundits and Fed watchers as not working, it is important that we rebut those arguments and explain that our tools will work over time and that we are looking for assistance both in Washington and in other nations' capitals. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thank you. Obviously, as I said before, we are in a very uncertain situation with respect to inflation. We have slowing economic growth, but we have also had very elevated prices. We had a very low unemployment rate and a very low rate of wage inflation, so we have to worry a little about whether we will get the benefits of lower resource utilization in terms of lower inflation. But when we look back historically at previous slowdowns, as President Stern mentioned about 1990-91 and as we have discussed about 1998-99, when we didn't actually have a formal slowdown, the Committee cut rates, and we didn't have a burst of inflation. Obviously, after the slowdown in 2001, the main challenge was concern about inflation getting too low rather than getting too high at that point. If we look over the past few cycles—and I think markets are aware of those—we see that you can have cuts in the federal funds rate that don't lead to inflation getting out of control, both when the economy is growing strongly and when the economy is quite weak. So although I do think that the situation is uncertain, I don't think that the markets would read a cut of 75 basis points today as a lack of commitment to inflation control. I think there is a lot of historical evidence that suggests that it is not necessarily inconsistent with that in any way.

The slight uptick that we have seen in some but not all of the surveys doesn't suggest that our inflation credibility has been lost. I think it is very difficult to read what the markets are saying because just look at the volatility over the past few days. Are those TIPS spreads really telling us about dramatic changes in the market's views of our credibility regarding what we are going to do in fighting inflation? I don't find that credible. There are a lot of other things that are going on that make it very difficult for us to read something out of that.

So I support alternative A. My thinking is actually very much along the lines of President Stern's—that we need to take out at least a little insurance going forward. The

statement in alternative A does a very good job of talking about some of the concerns about inflation. With respect to whether or not we include the explanation of why we expect inflation to come down in coming quarters, one of the things that changed in this version relative to the earlier ones is that there is no explicit mention of inflation expectations, which I think is right because there is such uncertainty about how to measure those. That the uncertainty about the inflation outlook has increased is the thing that we can read from what the markets are telling us. The assessment of risk in paragraph 4, where it mentions not only the policy actions but also the measures to foster the liquidity, is valuable so that people see that these are complementary tools and that we understand how they can work together. The mention of price stability at the end and how that differs from our statement from last time is a good way to signal that. But I really don't see evidence yet that we have lost credibility. If we look back historically at when we've done rate-cutting in either financially stressed times or actual economic downturns, at least over the past twenty-five years, it has not turned into inflationary challenges, and I don't see any evidence that the markets think otherwise. So I support alternative A, as is. Thank you

CHAIRMAN BERNANKE. Governor Mishkin.

MR. MISHKIN. Thank you, Mr. Chairman. Obviously, we are facing a very difficult policy problem, and that is why, Charlie, we will go have a beer later, so that we can deal with our depression.

MR. PLOSSER. How about two?

MR. MISHKIN. Yes, maybe two. Clearly, we are challenged by the fact that we have to balance the risks of both underlying inflation and inflation expectations going up. Against that, we have to worry about the downside risks to the economy, and the financial sector could really go south. So that is really the policy problem that we face.



I do support alternative A, but I would like to give some perspective on that because I may have a different take than others on this. If you are thinking about the risk-management viewpoint that I and some others have talked about, I want to emphasize that lowering the federal funds rate 75 basis points is not—and I want to repeat, is not—taking out insurance. If you look at the Greenbook projections, they have 75 basis points, and they have a further decline after that. The  $r^*$  has dropped 125 to 150—well, it depends on which model, but quite a bit more than 75. So from an insurance perspective, we should actually be doing more than 75 basis points. But I am not going to argue for that. In fact, I would argue for that if some of the other things, such as negative supply shocks, hadn't been happening.

I also have a concern about a phenomenon that has occurred, which I don't fully understand. Normally I would not worry about dollar depreciation. I gave a speech recently on pass-through—it was an opportunity for me to interact with Nathan's staff and to read the literature—and the evidence is that there is just not a whole lot in terms of pass-through. But lately we have seen something that is very peculiar, which is that, every time we have had depreciation in the dollar, the oil price has gone up. That makes me much more nervous about dollar depreciation than I would usually be. I hope that it may be just coincidence, but it makes me a little more nervous.

Another problem that we face is that we have not convinced the markets that we will be willing to bring out the baseball bat if inflation starts to get out of control. That is really a key part of the risk-management approach, and a key part of—I think Vince Reinhart called it post-gradualism in his speech. He gave a very interesting speech the other day and called it post-gradualism. But we have not yet convinced people about it, and part of the problem is that we really haven't operated in that way in the past. This is one reason that it is worthwhile talking

about this and saying that we need to think about operating in a different way. But it suggests to me that, if we actually were more aggressive than 75 basis points, it could have very negative reactions in the markets about our commitment to controlling inflation. So, that is one of the reasons that I strongly support the Chairman's proposal. I should say, by the way, that even so, the 75 basis point cut, which I don't think takes out enough insurance, does pose some risk that long-run inflation expectations will rise. But we have to realize that there is a lot of risk of really bad things happening that could mean that things really get out of control. The discomfort is that we now have a tough tradeoff. But then, when I think about the tradeoff, I am willing to say that we have to take the risk because otherwise the consequences could be very problematic.

I should mention that I have one concern about the wording in the statement. I usually don't make comments about the wording because I am just not subtle enough to get that. But I did worry a bit, for exactly the reason that Vice Chairman Geithner mentioned, about the issue that talking about inflation expectations getting unhinged could be actually very dangerous. The first sentence in alternative A says, "Inflation has been elevated, and some indicators of inflation expectations have risen." Well, I worry about that. First of all, the evidence is not completely clear on that. It is true that there has been an increase, and I have said it is about 10 basis points. But there is other research, and there is a lot of uncertainty about these measures. I am wondering, if we put that in, whether it will actually cause a problem in terms of market reaction. So it worries me a little. I would probably be more comfortable with what we have in alternative C, which is that inflation has been elevated and then the reasons for upward pressure. I am not sure that this would be helpful. I don't feel super strongly about it, but the comments of Vice Chairman Geithner made me a bit more worried about it than I otherwise would have been.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN GEITHNER. Let me just begin with a question because I think it is really central. It goes to the issue of how accommodative policy is now. Fundamentally that must be critical to the magnitude of the risks we are taking that we are going to get it wrong and inflation in the future is going to be too high. Now, I am not really part of your profession, but I have always found this chart to be the most discouraging prism on the choices we face.

CHAIRMAN BERNANKE. What chart is that?

VICE CHAIRMAN GEITHNER. This is the Bluebook equilibrium real funds rate chart. But any way you look at it, the real fed funds rate is closer to best estimates of equilibrium than during any downturn of the past two decades or similar periods of time. There is no gap between the estimated real rate today and the center of the estimate of where equilibrium is. If you look back to what that gap was in 1992, in 2001-02, or in 2003, there was a substantial gap, as most judgments about policy would suggest was necessary. I understand that there is a huge amount of uncertainty about estimates of equilibrium, but we can't be facing both the most serious risk of a financial crisis and of a deep, prolonged recession in 50, 30, or 20 years and at the same time the risk of having a very substantial rise in underlying inflation over the medium term. It seems to me that we are going to have one or the other. The choice we face, of course, is which risk we are prepared to take. Which mistake is the easier to correct for? It is a very hard judgment to make.

But I think we have to be confident that, if we end up being successful in averting the risk of a very, very dangerous, damaging spiral in the financial markets with the consequences of a very deep recession or a deeper recession than in the early 1990s, then we will be able to deal with the likely consequences that we will have more inflation and less moderation than we now anticipate. I guess I don't understand why we would not be confident in that. So let me just say

that I don't think this is easy. Like many of you, I think that it would be great if we got away with 50, but I think that is not tenable—not even close in this context.

Even though it would be nice if we had a consensus in the United States about a set of fiscal measures that we think would be good on the merits, we can't make monetary policy in a framework where we condition our actions on actions by the Congress. In an environment like this, it is not possible. If we do the right thing, does that mean it takes the pressure off them? Maybe, but probably not so much. But it can't constrain us from doing what is appropriate now.

Just one final thing: People who know this stuff quite well, who are reasonably calm people, say, "This is possibly the worst financial crisis in 50 years, and the most challenging set of pressures facing the central bank in 20 or 30 years." Think about that in this context. Okay? It is no surprise that we disagree; it is no surprise that the range of agreement about what we see and what we should do is going to be wide in that context. But just think very carefully about the signal it sends to the world at this moment to be explicit in public about the degree of dispersion about our views. Just think carefully about it because this is a special moment.

I fully support the language and the action in alternative A. President Fisher, I would not amend the last sentence to say "without sacrificing" partly because I think we need to project confidence in our capacity to manage long-term inflation outcomes. I am ambivalent, as you know, Mr. Chairman, about that clause that President Fisher suggested we delete about reflecting a projected leveling out. The virtue is that it explains and underpins, therefore, the basis for a medium-term forecast. The vice in it is that, as the Chairman himself said, the first part may seem like a thin reed on which to base our forecast, given what has been happening. I actually think, Governor Mishkin, that acknowledging some indicators of inflation expectations—it is really about uncertainty having increased—is helpful to our credibility. At the margin, it helps,

even though, sure, you can say that we really can't know what they are telling us about the market.

MR. MISHKIN. May I just ask a question back? I do think that inflation expectations are a concern. It is just a question of how the markets—and I am not as good at this as the people who really follow the markets—and the press will react to this phrase because I think that the amount of movement here is still very small. You know, the kinds of numbers we are talking about for inflation expectations are on the order of 10 to 20 basis points. Will this mention, because it is new, raise a flag that will get more attention and more concern than, in fact, is justified? That is the tricky problem here. We should acknowledge it, but again, I am not good enough at wordsmithing to figure out how to do that. This is a bit of my concern here. I don't know if anybody has any thoughts about how to handle it.

CHAIRMAN BERNANKE. President Fisher, I think I agree on the last sentence. I would like to keep it something that we have used frequently before and that emphasizes, in fact, the symmetry of the dual mandate. Are there other thoughts on either the indicators of inflation expectations or the list of reasons that anyone would prefer to change from where we are?

MR. KOHN. On inflation expectations, because they haven't risen very much, I agree with President Geithner. I like the fact that we tell people we are aware, but we could say "have edged higher" or something like that instead of "risen."

MR. MISHKIN. We could use my "smidgen" word, but "edged higher" is better.

MR. KOHN. Went up a smidge.

CHAIRMAN BERNANKE. All right. President Evans.

MR. EVANS. "Edged higher" is an unusual phrase.

MR. MISHKIN. "Have risen somewhat"?

MR. MADIGAN. I think an issue with “edged higher” is that it really does sound as though you have some very specific measures in mind.

CHAIRMAN BERNANKE. Brian, do you have a thought on “risen” versus “risen somewhat” versus taking it out?

MR. MADIGAN. I think if you take it out that very much raises the question of what to do with that language in red about the factors that would push inflation down. It would be tough to drop the inflation expectations thought and not have inflation expectations mentioned anywhere in the paragraph. There would just be vacant space where you had, at least in previous minutes, referred to it.

CHAIRMAN BERNANKE. Anyone else? Bill.

MR. DUDLEY. Adding just the word “slightly”—“risen slightly”—gets to your point.

MR. MISHKIN. “Slightly” or “somewhat” risen.

MR. WARSH. Brian, does “somewhat” mitigate it a little, or does that highlight it?

MR. MADIGAN. I’m not sure. I mean, in my mind it mitigates it.

VICE CHAIRMAN GEITHNER. Somewhat.

MR. KROZNER. Is “slightly” better than “somewhat”?

MR. KOHN. “Somewhat” is bigger than “slightly.”

MR. EVANS. That is 50 versus 25 in the old days.

MR. LOCKHART. Mr. Chairman, if I understand the discussion about this, when you say “some indicators have risen somewhat,” you are getting into territory that seems sort of mealy-mouthed.

CHAIRMAN BERNANKE. Right.

MR. KOHN. “Risen a little”?

MR. KROSZNER. What is wrong with “slightly”?

CHAIRMAN BERNANKE. All right. President Hoenig?

MR. HOENIG. Mr. Chairman, I don't want to prolong this too much, but in response to the Vice Chairman's comments, I am not sure I follow what you are saying. I think the model that you showed us, in terms of where the equilibrium rate is, is a short-term model. It is based upon a variety of estimates and output gaps, and I think there is plenty of room for disagreement around that model. So the fact that we have different views on this Committee is very healthy. Even to the world it can be very healthy because a lot of people out there have a different view of this and are wondering if there is any variance of views within this Committee. I think that can serve as useful a purpose as uniformity without objection.

VICE CHAIRMAN GEITHNER. Let me say for the record that I agree with everything you just said. My only point is that there is no surprise that we disagree or that it is complicated and we have a different view of the balance. If anything, what this chart shows is how broad the range of uncertainty is around this. That was part of my point in saying it. But I do think that the value of the public display of dispersion is different when you have this degree of a confidence problem in markets generally. That is the only thing I was suggesting. I completely agree about the value of diversity of view in this context. It is no surprise that we disagree in this period. My only suggestion is in terms of how we think about talking about it publicly, given that we are at such a delicate moment.

MR. HOENIG. Vice Chairman, we have a bubble developing in some parts of our area. I think they are aware of that, and so I think we have to be mindful of that in our discussion more broadly. That is why I think there are important differences that we should necessarily be able to—and should in fact—acknowledge publicly.

CHAIRMAN BERNANKE. Okay. Having thought about this, I think that “some indicators” does tone it down a bit. Perhaps we could just leave it where it is? Who knows what reaction this will get. Again, there is some sense here of trying to ratchet up at least our verbal attention to inflation. Let me say to everyone that I went through each of these alternatives and tried to find one that didn’t make me intensely uncomfortable—and I am still going through them. These are very, very difficult decisions. We are all people working in good faith, and we are all doing the best we can. I appreciate the candor and the honest comments, and we will continue to work together and to address these very, very difficult issues that we have. If you are ready, then perhaps we could take a vote.

MS. DANKER. The vote will encompass the directive I’ll read from the Bluebook and the statement for alternative A in the chart that you have in front of you.

“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 reducing the federal funds rate to an average of around 2¼ percent.”

Chairman Bernanke	Yes
Vice Chairman Geithner	Yes
President Fisher	No
Governor Kohn	Yes
Governor Kroszner	Yes
Governor Mishkin	Yes
President Pianalto	Yes
President Plosser	No
President Stern	Yes
Governor Warsh	Yes

CHAIRMAN BERNANKE. Thank you. We are going to recess for the discount rate. Unless there are objections, we are going to maintain the ¼ percentage point difference.

[Recess]



CHAIRMAN BERNANKE. Okay. The next meeting is April 29 and 30, Tuesday and Wednesday, a two-day meeting. We will talk about interest on reserves. And we will meet you shortly upstairs for a lunch in honor of Bill Poole. The meeting is adjourned.

END OF MEETING