

**Meeting of the Federal Open Market Committee on  
September 18, 2007**

A joint meeting of the Federal Open Market Committee and the Board of Governors of the Federal Reserve System was held in the offices of the Board of Governors in Washington, D.C., on Tuesday, September 18, 2007, at 8:30 a.m. Those present were the following:

Mr. Bernanke, Chairman  
Mr. Geithner, Vice Chairman  
Mr. Evans  
Mr. Hoenig  
Mr. Kohn  
Mr. Kroszner  
Mr. Mishkin  
Mr. Poole  
Mr. Rosengren  
Mr. Warsh

Mr. Fisher, Ms. Pianalto, and Messrs. Plosser and Stern, Alternate Members of the Federal Open Market Committee

Messrs. Lacker and Lockhart, and Ms. Yellen, Presidents of the Federal Reserve Banks of Richmond, Atlanta, and San Francisco, respectively

Mr. Madigan, Secretary and Economist  
Ms. Danker, Deputy Secretary  
Ms. Smith, Assistant Secretary  
Mr. Skidmore, Assistant Secretary  
Mr. Alvarez, General Counsel  
Mr. Baxter, Deputy General Counsel  
Ms. K. Johnson, Economist  
Mr. Stockton, Economist

Messrs. Clouse, Connors, Fuhrer, Kamin, Rasche, Slifman, and Wilcox, Associate Economists

Mr. Dudley, Manager, System Open Market Account

Ms. J. Johnson,<sup>1</sup> Secretary, Office of the Secretary, Board of Governors

Mr. Frierson,<sup>1</sup> Deputy Secretary, Office of the Secretary, Board of Governors

Ms. Bailey<sup>1</sup> and Mr. Roberts,<sup>1</sup> Deputy Directors, Division of Banking Supervision and Regulation, Board of Governors

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<sup>1</sup> Attended portion of the meeting relating to the discussion of approaches to stabilizing money markets.

Mr. English, Senior Associate Director, Division of Monetary Affairs, Board of Governors

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

Mr. Wright, Deputy Associate Director, Division of Monetary Affairs, Board of Governors

Mr. G. Evans,<sup>1</sup> Assistant Director, Division of Reserve Bank Operations and Payment Systems, Board of Governors

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

Mr. Oliner, Senior Adviser, Division of Research and Statistics, Board of Governors

Mr. Meyer, Visiting Reserve Bank Officer, Division of Monetary Affairs, Board of Governors

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

Mr. Natalucci, Senior Economist, Division of Monetary Affairs, Board of Governors

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

Ms. Beattie,<sup>1</sup> Assistant to the Secretary, Office of the Secretary, Board of Governors

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

Ms. Holcomb, First Vice President, Federal Reserve Bank of Dallas

Messrs. Judd, Rosenblum, and Sniderman, Executive Vice Presidents, Federal Reserve Banks of San Francisco, Dallas, and Cleveland, respectively

Messrs. Dzina and Hakkio, Mes. Krieger<sup>1</sup> and Mester, and Messrs. Rolnick and Weinberg, Senior Vice Presidents, Federal Reserve Banks of New York, Kansas City, New York, Philadelphia, Minneapolis, and Richmond, respectively

Messrs. Krane, Peach, and Robertson, Vice Presidents, Federal Reserve Banks of Chicago, New York, and Atlanta, respectively

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**Transcript of the Federal Open Market Committee Meeting of  
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CHAIRMAN BERNANKE. Good morning, everybody. I'd like to welcome Charlie Evans to the table. Charlie is no stranger. He has been attending these meetings since February 1995, certainly ahead of me. So congratulations and welcome.

MR. EVANS. Thank you very much.

CHAIRMAN BERNANKE. I'd also like to thank Cathy Minehan *in absentia* [laughter] for being willing to postpone her celebratory lunch until the next meeting, but we will do that in October. The first item of business is to select associate economists. With Brian Madigan becoming the secretary and Mr. Evans taking on a new role, we need to appoint two associate economists: Jim Clouse from the Board and Dan Sullivan from Chicago have been nominated. Do I have a motion?

SPEAKER. Moved.

CHAIRMAN BERNANKE. Moved. Discussion? Thank you. All right. Let's turn now to the Desk operations. Bill.

MR. DUDLEY.<sup>1</sup> Thank you, Mr. Chairman. I'll be referring to the handout that you have in front of you. In my mind, there are three key questions. First, how did the problems in the subprime mortgage area—with losses that probably will ultimately turn out to be in a range of \$100 billion to \$200 billion—lead to such broad market distress? Second, what is the cause of the dysfunction in U.S. and European money markets? Third, how far along are we in terms of the adjustment process—in other words, when might we anticipate a resumption of normal market function?

Turning to the first question, the losses in subprime mortgages had wide-ranging effects because the poor investment performance made investors much less willing to invest in structured-finance products more generally. Investors lost confidence because highly rated securities that referenced subprime assets performed poorly and because investors found it difficult to value complex structured-finance products. This loss of confidence triggered several broader developments: the inability of mortgage originators to securitize nonconforming mortgage loans; the rapid

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

contraction of the asset-backed commercial paper (ABCP) market; the virtual shutdown of the collateralized debt obligation (CDO) and collateralized loan obligation (CLO) markets; the sharp shifts we saw into and out of Treasury-only versus prime money market mutual funds, which in turn disrupted the Treasury bill market; and the anticipated pressure on bank balance sheets and the upward pressure on term funding rates.

The pressure on bank balance sheets is coming from three major sources. First, investor demand for securitized non-agency mortgage-backed securities has dried up. Bank originators now have to hold such loans in their bank portfolios. Second, bank backstop liquidity facilities have been triggered as investor appetite for asset-backed commercial paper has fallen sharply. Third, banks are expected to have difficulty syndicating the bridge loans that they provided to finance leveraged buyouts.

Of these three sources of pressure, the rollup of ABCP programs has been, in my view, the most important. The magnitude of the potential funding requirement is the largest, and how much will come back onto bank balance sheets is very uncertain. The constraint on mortgage loan origination can be seen most visibly in the widening of the spread between fixed-rate prime jumbo mortgage loan rates and conforming mortgage loan rates. As you can see in exhibit 1, the spread has widened from around 25 basis points to around 100 basis points in recent weeks. The sharp contraction in the ABCP market began when commercial paper investors became aware that their investments could be vulnerable to loss but were uncertain as to the extent of their exposure in particular programs. This fear of loss had a legitimate basis for those ABCP programs that finance mortgage-related assets without full bank credit enhancement. An inability to roll over these programs in the current market would force the liquidation of the assets. In the current market, that could lead to investor losses. The problem started in extendable commercial paper market programs, where the credit enhancement backstop by banks was typically either absent or less than 100 percent. The problem then quickly migrated to structured-investment vehicle (SIV) programs, which suffered from similar shortcomings. From there, the problem spread as risk-averse investors started to shun the entire asset class. Asset-backed commercial paper rates rose for those programs that were able to roll over their outstanding commercial paper. This is shown in exhibit 2, which compares unsecured and secured commercial paper rates. The volume of outstanding asset-backed commercial paper shrank sharply as some issuers were unable to roll over their maturing paper. Exhibit 3 illustrates the downtrend in the volume of outstanding ABCP. Exhibit 4 shows the maturity structure of outstanding asset-backed commercial paper and highlights the high proportion of paper that is now being rolled on an overnight basis. The pressure on the asset-backed commercial paper market was temporarily exacerbated by the behavior of money market mutual fund investors, who shifted funds last month from prime money market funds to Treasury-only money market funds (see exhibit 5). Because the total assets in money market mutual funds are nearly four times the size of outstanding Treasury bills, these flows led to a large, albeit mostly transitory fall in Treasury bill yields. That is shown in exhibit 6.

The good news is that the money flows into the prime money mutual funds have stabilized. This reflects greater discernment among investors about the risks associated with different types of asset-backed commercial paper and the widening yield differentials between prime and Treasury-only money market funds. It is noteworthy that those areas of the asset-backed commercial paper market with underlying structural problems—primarily the extendable, SIV, and SIV-lite portions of the market—represent only a small proportion of total asset-backed commercial paper outstanding. For example, as shown in exhibit 7, SIV programs represented only about 7 percent of the asset-backed commercial paper market before the recent sharp contraction. Moreover, as shown in exhibit 8, much of the asset-backed commercial paper market does not finance residential mortgage asset-backed securities, so there is less uncertainty about the underlying value of the assets. Also, much of the market has solid credit support, with 100 percent bank credit enhancement. This suggests that, as time passes, investors will gradually be able to distinguish between the different types of the ABCP programs and stability will return to the multi-seller, bank-sponsored programs. Already, the pace of contraction of the overall ABCP market has slowed significantly. However, the extendable and SIV programs are likely to continue to be under pressure.

The third source of balance sheet pressure stems from the sharp contraction in CDO and CLO issuance. As can be seen in exhibit 9, CDO and CLO issuance volumes have plummeted in recent months. The virtual closure of the CDO market has led, in turn, to a virtual cessation of high-yield debt issuance—illustrated in exhibit 10. These developments have created uncertainty for commercial and investment banks about their ability to syndicate the large volume of loan and debt commitments that they have made to finance private equity buyouts. These institutions are faced with the prospect that they may have to carry such loans on their books for an extended period at a discount to par value. Syndication will be more difficult because the ability to transform a large proportion of these obligations into marketable investment-grade products through the alchemy of structured finance is not currently an available option.

This pressure on bank balance sheets—both existing and anticipated—has led to significant dysfunction in financial markets. In particular, primary dealers have pulled back in their willingness to finance the security positions of investment banks, hedge funds, and other leveraged investors. Exhibit 11 illustrates the median repurchase-rate bid-asked spread by primary dealers for three types of collateral—GSE MBS, prime MBS, and high-yield corporate debt—at overnight, one-week, and one-month maturities. As can be seen, there has been an upward trend in bid-asked spreads, especially at the one-month maturity. Exhibit 12 illustrates the median haircuts applied against such collateral. Again, there has been an increase, which has been particularly pronounced at the one-month maturity.

At the same time, this balance sheet pressure and worries about counterparty risk have led to a significant rise in term borrowing rates. Banks that are sellers of funds have shifted to the overnight market to preserve their liquidity, and this shift has

starved the term market of funds, pushing those rates higher. As shown in exhibit 13, the spread between the one-month LIBOR and the one-month interest rate swap rate has widened sharply, and the one-month LIBOR has generally traded considerably above the anticipated level of the overnight federal funds rate. The same pressure on funding rates has been also evident in euribor rates (see exhibit 14). The rise in term rates has pushed banks that depend on funding from the interbank market into the overnight market. In addition, these depository institutions have turned to the Federal Home Loan Bank system as a source of term funding. For example, FHLB advances rose \$110 billion in August. In contrast, despite the 50 basis point reduction in the spread between the discount rate and the federal funds rate target, the dollar value of discount window borrowings remains modest, as shown in exhibit 15. This reflects the lower cost of FHLB advances, the ability to borrow at longer terms from the FHLB, and the lack of stigma in using such advances as a source of funding.

So where do we go from here? Clearly, the adjustment process is far from over. Asset-backed commercial paper programs are still being rolled up, and there is considerable uncertainty about how difficult it will be to roll some of this paper over quarter-end. Moreover, it remains unclear what proportion of leveraged loan commitments commercial and investment banks will be able to syndicate and at what price. Despite the big backlog and the end of the August doldrums, there has, as yet, been little syndication activity. The good news, of course, is that as time passes, the uncertainty about bank balance sheet pressures and funding requirements should lessen. Moreover, investors' ability to distinguish between "good" and "bad" ABCP programs and structured-finance products should continue to improve. The bad news is that the stress caused by the forcible deleveraging of the nonbank financial sector could lead to further losses accompanied by headlines that could further damage investor confidence. Moreover, the increased reliance by banks on overnight funding increases rollover risk and may limit the willingness of banks to expand their balance sheets to accommodate the deleveraging of the nonbank financial sector. In the mortgage sector, depository institutions will undoubtedly—at the right price—take up the slack in the prime jumbo mortgage market. But nondepository institutions are unlikely to be able to originate and securitize nonconforming mortgages in appreciable volume for some time.

The tone in financial markets has improved a bit in recent days. Nevertheless, we still appear to be in an environment in which the dominant theme is risk aversion. This can be seen in a matrix that measures the correlation among the price movements in the major asset classes (see exhibit 16). In times when markets are calm and untroubled, the correlation coefficients are generally low. As you can see in the exhibit, which examines these correlations since the August 7 FOMC meeting, the correlation coefficients have been very high recently.

In the foreign exchange markets, two developments are worth noting. First, the turmoil in money markets did impair the functioning of the foreign exchange swap market. This made it more difficult for banks in Europe that are structurally short of dollars to obtain the dollar funding needed to fund their assets. In recent days, this

market function has improved. Second, the dollar has weakened. As shown in exhibit 17, the dollar has fallen to a record low against the euro. But don't be too impressed by that headline. On a broad trade-weighted basis, the decline of the dollar has been modest, with a decline of less than 1 percent from the last FOMC meeting and a fall of slightly more than 4 percent from the start of the year. Moreover, this softness in the dollar does not appear to signal any fundamental shift in the willingness of foreign investors to hold dollar-denominated assets. Instead, it appears to be driven mainly by changing interest rate expectations. As shown in exhibit 18, the exchange rate of the dollar versus the euro has continued to track changes in expected short-term interest rate differentials between the United States and Europe.

Not surprisingly, our dealer survey reveals a large decline in short-term rate expectations. Exhibits 19 and 20 compare the dealer surveys before the August 7 FOMC meeting and before the current FOMC meeting. The green circles represent the average of the dealer forecasts, and the blue circles represent the range sized by the number of dealers at each value. As can be seen, the average of the dealer modal forecasts for mid-2008 has fallen more than 60 basis points. Market expectations—as reflected by the solid bold lines—have declined about the same amount and remain below the average dealer modal forecasts. With respect to the outcome of this meeting, a slight majority of dealers expect a 25 basis point reduction in the target federal funds rate rather than a 50 basis point cut. Only one dealer expects no change in the federal funds rate target. Uncertainty about the short-term interest rate path has also increased. This is evident both in the dealer survey and in the probability distribution of rate outcomes implied by options prices on Eurodollar futures. As can be seen in exhibit 21, the probability distribution of rate outcomes has become much broader since the August 7 FOMC meeting.

Finally, open market operations since the last FOMC meeting warrant some discussion. As you know, in early August, following persistent upward pressure on the federal funds rate and an extraordinarily large reserve-adding provision by the ECB, we aggressively added reserves on August 10. That provision of reserves did break the upward pressure on the federal funds rate, and the federal funds rate traded notably soft over the remainder of that two-week reserve maintenance period. Since that time, we have attempted to pull back on our provision of reserves in order to push the federal funds rate back up toward its target. Notice that the blue bars in exhibit 22, which measure daily excess reserves before borrowing, have been generally in negative territory over the past month. Although we have had some success in pushing the effective federal funds rate higher, it has generally traded over the past month below the 5¼ percent target.

Our efforts to push the federal funds rate back toward the target have been undermined by several factors. First, expectations about the possibility of an intermeeting cut in the federal funds rate target have caused the federal funds rate to trade somewhat soft. Also, in recent days, the effective rate has been held down somewhat by expectations of a rate cut at today's meeting. Second, the narrower margin between the discount rate and the federal funds rate target makes it more

difficult to push up the effective federal funds rate. The upper band of the corridor above 5¼ percent is now half as wide as before even as the lower bound for the federal funds rate remains at 0 percent. The lower discount rate acts as a cap on how high the federal funds rate can climb when reserves are tight. Third, we have had bad luck in the sense that most of our forecasting misses in terms of autonomous factors that affect reserves—such as float, Treasury balances, currency demand, and borrowings at the window—have caused us to inadvertently leave more reserves in the banking system than we had intended. Our difficulty in pushing up the effective rate can be illustrated by our experience last Wednesday, the last day of the two-week reserve maintenance period. Despite a consistently stingy provision of reserves that resulted in \$5 billion of overnight primary credit borrowing for the day and \$7.2 billion in total borrowing, the effective rate for that Wednesday was 5.18 percent. I would note, though, that in the past two days we have actually pushed the funds rate effectively up to its target.

There were no foreign exchange operations during this period. I request a vote to ratify the operations conducted by the System Open Market Account since the August 7 FOMC meeting. Of course, I am very happy to take questions.

CHAIRMAN BERNANKE. Are there any questions for Bill? President Plosser.

MR. PLOSSER. I appreciate your comments on this last point, but I think that the fact that the fed funds rate has been trading so low for so long is problematic. Certainly around August 9, when we started the interventions, that's all understandable. But the Committee made it very clear at that time that it wasn't changing the targeted funds rate, and yet for the past month it has been essentially below. So in my mind that has raised three questions. One is a technical question about our ability to actually target the fed funds rate using the procedures that we have in place. We continue to quote a price target and try to control it using quantities. I still believe it would be a lot easier just to set the price target and buy and sell. That's an operational question that I think is on the table for another day. It also raised the question to me as I watched it going on why the Desk did not choose to intervene more frequently during the day to be more aggressive when they saw that their forecast for the day's balances was not accurate. There is nothing that says you can't go back in during the day to help rectify some of that, and I'd like some explanation as to why we didn't do that or whether that's an option. The third question is actually a more serious one because



it combines a technical issue and a philosophical one. I think allowing the fed funds rate to trade so low for so long away from our target really creates a credibility problem for this Committee. It puts us in an awkward position now because, in effect, it hasn't gone unnoticed by the investment community. Some have called it a "stealth" rate cut that is already in effect. Some have said that the Fed has already cut the fed funds rate, and it puts the Committee's decision today in a somewhat awkward position because people look back and say, "Well, they have already done it." So I think it is important that we think about mechanisms and ways to ensure—at least going forward—that, if the Committee has a target, we can be successful in achieving it. So I'd just like some further enlightenment there, if I could.

MR. DUDLEY. Turning first to your first question, why we do it the way that we do—well, with the new authority to pay interest on reserves, we are going to take a pretty broad look at the whole issue of how we target the federal funds rate and how we manage reserves more generally. So I think that's a legitimate question, and it is going to be done as part of that process. Obviously, the way we do it today is based on a sort of historical evolution that started when the Fed did not reveal what the federal funds rate target was. So I think it's probably fair to say that four or five years from now, when we have that new authority, we may be doing things quite differently.

In terms of the issue of going back in later in the day, the problem there is that we don't really know what's happening to the autonomous factors until the next morning. So we don't know exactly how we're doing in terms of tracking the reserve provisions relative to our forecast in real time. We don't have that.

MR. PLOSSER. But you see the rate.

MR. DUDLEY. We do see the rate. We could be more aggressive and push people to the window, but I think it is important in this environment not to be contributing to market turmoil. We

felt that the right thing to do was to err on the side of not pushing people forcibly to the window when the market was under some distress. I would also say that the fed funds rate, while it has traded soft, it hasn't traded that soft. The effective rate so far this month has been 5.08, and I think that, coming into this meeting, we have pretty much eliminated from the minds of people in the markets that there was a stealth easing, especially in light of where the federal funds rate has been trading over the past week. So I don't see that as a significant issue for this meeting.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. Thank you, Mr. Chairman. Bill, I just want to make sure that I understand what you said in your excellent presentation. I think I heard you say that, as time passes, investors in the markets will become more discriminating. Already we're seeing signs of returning stability. I'm trying to differentiate between what we had earlier—serious counterparty risk and phobias—and what we have now—which seems to be concerns about balance sheet risk. I want to understand better the distinction between the two. I read Egon's briefing last night, which by the way was very, very solid. What I read was that the largest banks are well positioned to absorb even larger exposures than they currently anticipate, and the number in that document was \$1 trillion—a significant number for five banks to absorb. Given what you just presented to us—I think I interpreted you correctly—the concern about counterparty risk is diminishing, but it is still there. The balance sheet risk issue is somewhat defined, although there are uncertainties—you mentioned them yourself. There's headline risk, which cuts two ways, by the way, and I want to talk about that during my other intervention. There is also a surprise loss that might occur. Could you distinguish for us whether or not we've seen a reduction in counterparty risk, and if so, could you define it somewhat? How serious is the balance sheet risk from your perspective against the background of the briefing we received last night, which indicated that it appears to be manageable?

MR. DUDLEY. Well, it's difficult to sort out exactly how much of that term premium that we see in the term funding markets represents counterparty risk versus balance sheet constraints. I think in the United States that it is probably more of a balance sheet issue. In Europe it's probably more counterparty risk. The general sense is that the U.S. banks are very healthy and, as you note, well capitalized. However, the fact that you still have quite a bit of room before you hit that boundary of "well capitalized" doesn't mean that the banks aren't concerned about potential balance sheet pressures. The problem they have right now is that they can't really size with any accuracy how much will be coming onto their balance sheets over the next few months through asset-backed commercial paper, through bank conduits, and through other things for which they may be on the hook that they didn't expect to be on the hook for. So I wouldn't take the boundary line of "well capitalized" versus "not well capitalized" as the constraint. I think the constraint actually starts to bind quite a bit before you get to that point.

MR. FISHER. We talked about the conduit question somewhat on the calls. Again, I assume we've done sensitivity analysis to the degree that we can in terms of the potential for having to absorb some of that risk and bring it onto the balance sheet. Is that correct?

MR. DUDLEY. The analysis that has been done has suggested that the banks are well capitalized and should, with one or two exceptions, be able to handle this balance sheet expansion reasonably well; but they can't say that with absolute certainty.

MR. FISHER. Of course, of course.

MR. DUDLEY. Another thing happening is that there is a potential problem on the earnings side. You can imagine a worst case scenario in which you can't syndicate any of the loans and then the loans have to be marked down significantly. That has an earnings consequence. So then the balance sheet is going to be affected not just by what's happening in terms of the assets but

also by what's happening in terms of the capital. I think the uncertainty about it will probably turn out to be more of a problem than the actual reality, but it's going to take time for us to find out what the actual reality is.

MR. FISHER. May I ask one more question, Mr. Chairman? At the last meeting I asked about commercial paper risk in Europe and got nods of not a great risk. Is there anything that you see or that you can think of that we don't know or that hasn't been in this presentation that would indicate significant potential for risk?

MR. DUDLEY. I would hesitate to say that I know with any great clarity that there's nothing else there in Europe. I think we have all been a bit surprised by the size of some of the conduits that some European banks were sponsoring relative to their capital. I would be very hesitant to say that we have transparency regarding that marketplace and know with certainty that there's nothing else there.

MR. FISHER. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Stern.

MR. STERN. I would like to return to the issues that President Plosser raised, which I think are very serious for this Committee. Maybe the question is what you would have done differently with the benefit of hindsight to have come closer to the target. My "back of the envelope" calculation starting with August 9 or August 10 is that maybe the fed funds rate averaged about 5 percent—so a full  $\frac{1}{4}$  percentage point below the target. If you felt constrained to enter the market later in the day because of concerns about adding to turmoil, you certainly could have consulted with the Committee about the tradeoff there. But it does seem to me that, when we establish a target, we have an obligation to achieve that target. Obviously, early in the period erring on the side

of generosity was no problem, but it seemed to me that we gave away some degrees of freedom, shall we say, by the way things proceeded. I find that of considerable concern.

MR. DUDLEY. But I would just reemphasize the fact that we did try to be stingy. Our ex ante provision of reserves was less than what we thought that the market needed, and we thought that would push up the federal funds rate. We do not have control over all the factors that affect the demand for reserves, and unfortunately they consistently came in on the side of adding more reserves into the system than we intended. That said, we have been pretty consistently trying to push back on the market to get the effective federal funds rate back toward the target, and I think we can say that we made it by the meeting. I think there are very few people in the market today who believe that there's a stealth easing in the market.

VICE CHAIRMAN GEITHNER. Mr. Chairman.

CHAIRMAN BERNANKE. Vice Chairman Geithner.

VICE CHAIRMAN GEITHNER. Just to reinforce what Bill said—of course, we spent a lot of time thinking through exactly the risks that you are worried about in this context, and we'll have a lot to reflect on in terms of the nature of the regime and what the legislative authority gives us going forward. But I think that Bill and his people really had just a simple choice, which was—particularly at that point late in August and early in September—whether they should have acted in a way that raised the possibility of having fed funds trade significantly above target over this period. If you look at the experience of the other central banks managing this situation in the past six weeks or so and what happened when they prematurely acted in a way that ended with having their rates trade substantially firm to target and the effects of that on behavior and the market, I am completely confident that our guys erred in the right direction. I also don't believe, just to reinforce what Bill said, that anybody serious in the markets viewed what the Desk was doing and the behavior

regarding where fed funds were traded as having a signaling effect or as constraining the flexibility of the Committee. It is true that you had a bunch of people in mid-August talking about that possibility and wondering whether they should read the very soft trading of fed funds as an indication of the stance of monetary policy going forward, but I think that got sucked out of the market relatively quickly.

Again, I think you're raising absolutely the right questions. We grapple with those questions every day. We basically made the judgment that to adopt a much more aggressive stance in being stingy with the reserves at various points in this period would have created too much risk of fed funds trading firm relative to target at a moment when psychology and confidence were very, very fragile. I really think the experience of other central banks was a good counter example of the cost of the alternative strategy. Now, of course, we will have a chance over time to go back and do a much more detailed review.

Another thing I would say about coming in later in the day is that it's very important to have some stability in the basic framework with which the Desk operates, particularly after what we did the week before August 17 and on August 17. To have a lot of changes at the same time in the standard operating procedures of the Desk would have created more risk of uncertainty about what we were doing. We were trying to find a balance between the imperatives of a relatively steady hand and the risk that you are phrasing in absolutely legitimate questions. We'll have a chance to reflect on a lot of things after this period, but my own view is that they made exactly the right judgment.

CHAIRMAN BERNANKE. One complexity in this whole period is that there is a surprisingly large demand for dollars in Europe, which of course is early in the day. So the fed funds rate was opening very, very high, very tight, and then there were judgments about how to

bring it down during the peak trading period of the U.S. markets. That led to guesses about how many reserves to inject before the end of the day. So the dysfunction in the normal interbank market process—precautionary demand for dollars in Europe—led to some very unusual stresses early in the day, which complicated Bill's job considerably.

MR. FISHER. We still love Bill, by the way.

CHAIRMAN BERNANKE. Oh, we all love Bill. [Laughter]

MR. DUDLEY. For the record, I laughed.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. I want to ask about the term funding market, and I want you to help us understand what we know about that. In typical times, like before this, do we know how much lending was done at term in the fed funds market? Do we know what names were typically involved—is there a flow across the banking system of some particular structure—and what kind of spreads are typical? Then, what have we been observing now, in contrast? Related to this, do we know what names are borrowing at term now? Do we have a sense of the extent to which the elevated spread is a risk premium or some other effect? Are people who are borrowing at term tapped out at the Home Loan Bank? Does that have some significance in the term market? Is there an interaction between options at the Home Loan Bank and the term market?

MR. DUDLEY. On the question about volume, there's no question that volume went up considerably in the overnight market—about 20 percent, as near as we can judge over this period. Since the term market was mostly shut down, especially in term fed funds, there has been very little in term fed funds trading. You can almost infer that most volume is done overnight but probably 20 percent or so is done term. Almost all of that crowded back into the overnight market. So there was an increase, as near as we can measure, of about 20 percent in overnight fed funds activity over

the past month compared with normal. Now, in terms of who is actually borrowing at term—well, very few people were actually borrowing at term. There was probably a bit of a “lemons” problem in the term market in the sense that—because term rates were elevated and those rates were not very attractive economically—your wanting to borrow in the term market was a sign that you were probably not in good shape in terms of your own liquidity position. I think that contributed to the shutdown of the term market. Because of the economics really—why are you doing that unless you’re in bad shape and you really need the funds? I think that contributed to the shrinking of the term market. Really two things were going on. One, banks that had the funds to lend didn’t want to lend term because they weren’t sure what they would need that money for down the road, depending on what was going to come onto their balance sheets. Two, people who wanted to borrow term were the least attractive borrowers. That caused the market to essentially dry up over this period. I think it is starting to come back. We’re not back to normal because obviously the term rates are still somewhat elevated relative to the overnight rate. So it’s still not that attractive from an economic perspective, but it is certainly more attractive than it was even a week ago.

MR. LACKER. If I could just follow up, I know the Desk tracks overnight fed funds trades, and you get from the dealers the quantities at different rates in order to calculate the effective rate. Are you inferring term volume from that, or do we have any other independent quantitative sources on the volume of term funding?

MR. DUDLEY. I haven’t actually seen any volume data on term. They may, in fact, exist. What we did, though, is look at the volume in the overnight federal funds market, and we saw that go up about 20 percent. So if you start with the premise that the banks that have excess funds to lend aren’t going to change much month to month, you can pretty much infer that most of it is coming out of the term market.



MR. LACKER. Both large banks in our District have gone from being net borrowers to being large net lenders. One, in fact, says it's the largest in the market and lends \$10 billion to \$15 billion every night overnight, and they used to borrow a couple of billion dollars every day. Could something like that account for the volume in the funds market?

MR. DUDLEY. Yes, obviously that moves in that direction, but if I remember correctly, the number on the volume of the fed funds market is in the \$400 billion to \$500 billion range. Twenty percent on that kind of level is quite a bit bigger than what you're seeing.

MR. LACKER. Okay.

MR. MADIGAN. That would include brokered trades and nonbrokered trades.

VICE CHAIRMAN GEITHNER. But, Mr. Chairman, if I'm not mistaken, I think that the term market for interbank liquidity is largely offshore in Europe, not in fed funds onshore. I'm not sure that helps when we get into this context.

MR. LACKER. Right. I was asking about the demand. I was curious about what we know about the domestic part.

VICE CHAIRMAN GEITHNER. Our research people have tried to figure out whether they could infer or take from Fedwire data other indications of who's lending at what maturities and who's borrowing at what maturities and what the balance is. My own sense from looking at this, and maybe I just haven't figured it out yet, is that it doesn't give you the kind of clarity that you were looking for.

MR. DUDLEY. It's an over-the-counter market, and in most over-the-counter markets we do not have the kind of volume data we would like to have.

MR. LACKER. Just one tiny thing—in the overnight market, from the brokers, we have volumes traded at different rates. For the term fed funds rate, which is showing up in a graph or

two—I can't remember where—does that come off broker screens? We don't have trades on that, do we?

MR. DUDLEY. I don't know the answer to that.

MR. MADIGAN. There is not a regular data source.

MR. LACKER. All right. Thanks.

CHAIRMAN BERNANKE. Are there other questions for Bill? If not, I need a vote to ratify domestic open market operations.

MR. POOLE. So moved.

CHAIRMAN BERNANKE. Without objection. Thank you. May we turn now to the staff presentation on the economic situation? Dave Stockton and Karen Johnson will start with the economic overview, and then Brian will make a few comments on the projections that we submitted. Dave.

MR. STOCKTON. Thank you, Mr. Chairman. "This has been a far from placid time. Indeed, the intermeeting period has been marked by financial tumult of such a magnitude as to significantly alter the outlook for the economy. A deeper retrenchment in U.S. stock markets, more-cautious credit provision, and more-serious disruptions to economic growth abroad are now expected to combine to produce a sharper deceleration in output than we had projected in August." These words were taken from the first page in the Greenbook of September 1998. [Laughter] While the particulars obviously differ in many important respects from that period, we once again face substantial financial turbulence; and once again, we have marked down our projection of real activity on the expectation that recent financial developments will impart considerable restraint on activity in the quarters ahead. Before explaining these changes, let me read to you from the first page of another Greenbook, and I quote: "[T]he economy has continued to exhibit remarkable dynamism, generating hefty gains in employment and income. We have tacked about  $\frac{3}{4}$  percentage point onto our previous forecast of first-quarter real GDP growth, and the evident momentum of domestic demand has led us to elevate our projection for output growth over the near term a bit as well." That passage was taken from the Greenbook of March 1999, just six months after the onset of that period of financial disturbance.

Needless to say, the experience of that episode was not lost on us as we approached the construction of the current forecast. But neither were the episodes of the summer of 1990 and the fall of 2000, when we thought financial and other factors

would result in a period of below-trend growth but that outright recession would be avoided. So the question is, Are we projecting too much or too little weakness in real activity over the next several quarters? Answering that question has two aspects. One is whether we have correctly gauged the magnitude of the potential restraint on real activity arising from the recent developments in mortgage and other credit markets. The other is whether we have appropriately assessed the underlying strength of the economy being subjected to those shocks. I think it's fair to say that part of our mistake in 1998 was a failure to appreciate just how strong the U.S. economy was as we entered that period.

Could we be making that mistake again? Possibly. The incoming data did lead us to revise up our estimates of the growth in real GDP in the second and third quarters by  $\frac{1}{4}$  and  $\frac{1}{2}$  percentage point, respectively. Most notably, consumer spending has surprised us to the upside. Last Friday's report on retail sales provided another positive innovation. Although the spending figures for August were right in line with our expectations, the upward revision to July suggests that the growth of real PCE in the third quarter will be about  $\frac{1}{4}$  percentage point stronger than we projected in last week's Greenbook. Elsewhere, the growth of exports has continued to outstrip our expectations, providing greater impetus to domestic production. That added impetus may help explain factory output, which has also been a bit stronger, on net, than anticipated in our August projection. Manufacturing IP excluding motor vehicles is estimated to have fallen 0.3 percent last month, but that decline came on the heels of upward-revised increases of 0.7 percent in June and July. We are now projecting manufacturing IP excluding motor vehicles to have increased  $4\frac{3}{4}$  percent in the third quarter, a bit more than in our August forecast.

Not all the news, however, has been favorable. Despite a rebound in motor vehicle sales in August, the automakers still found themselves with uncomfortably high inventories at the end of the summer and have announced substantial reductions in assembly schedules for the fourth quarter. In our projection, the cut in motor vehicle production lops  $\frac{1}{2}$  percentage point off the growth of real GDP in the fourth quarter, about  $\frac{1}{4}$  percentage point more than we had earlier expected. The labor market report also was a bit weaker than we had penciled into our projection at the time of the August FOMC meeting. Private payrolls increased just 24,000 last month, which, combined with downward revisions in June and July, left the level of employment about 100,000 shy of our expectations. Nevertheless, we didn't attach a great deal of signal to the employment report in terms of its implications for real activity. As you know, despite the fact that real GDP was coming in close to our expectations most of this year, we had been fairly consistently surprised to the upside by employment. For the most part, we had attributed that surprising strength to an unusual degree of labor hoarding that was resulting in a more-pronounced cyclical sag in productivity than is typical. Now that the employment figures have softened, we are inclined to let much of that softness show through in higher labor productivity rather than weaker output. Still, there is no denying that labor demand over the past three months now looks a bit weaker than we expected.

We see the incoming data taken together as suggesting that there was a bit more strength to the expansion through the summer than we had earlier recognized. But we have seen little to suggest that the economy was either gathering any momentum or seriously faltering as we entered the period of increased financial turbulence. Obviously, getting the starting point right for the projection is important. But the main action in this forecast has been our reaction to developments in mortgage and other credit markets. I would love to dazzle you this morning with precise scientific estimates of the effects on spending and activity of difficulties involving subprime mortgages, structured-investment vehicles, leveraged loans, and the like. But, sadly, that will not be the case. Rather, because you seem to be on the brink of joining me in the humbling world of forecasting, I thought that I would invite you to don your hair nets and white butcher smocks and join me for a tour of the sausage factory. [Laughter]

The difficulty we confronted in this forecast is that, even after decades worth of research on credit channels and financial accelerators—much of it done by economists at all levels in the Federal Reserve System—the financial transmission mechanisms in most of the workhorse macro models that we use for forecasting are still rudimentary. As a result, much of what has occurred doesn't even directly feed into our models. But that doesn't mean that it isn't important. Indeed, the residuals in our main spending equations seem to be negatively correlated with measures of financial stress. In other words, our models tend to overpredict spending in periods of financial disturbance. To be sure, that general tendency is not evident in all episodes. Shortfalls in spending were sizable in the "headwinds" period of the early 1990s and in the aftermath of the stock market collapse in the early part of this decade. But we have found little evidence of any material effects on spending during the 1998-99 episode. In very broad terms, we were guided in our revisions to the forecast by the average historical tendency of these spending equations to overpredict in periods of financial stress. As for the specifics, we made adjustments in those areas that seem most likely to be affected in this particular episode.

Housing, of course, is at the epicenter of the current financial shock. In response to the intensifying problems in mortgage markets and the increasingly bleak anecdotes, we slashed our housing forecast significantly further. We now expect new home sales to drop another 18 percent by the end of this year and single-family starts to drop another 25 percent by early next year. If this forecast comes to pass, this housing downturn will come close to matching in severity that of the late 1970s and early 1980s. Underlying this projection is an assumption that nonprime originations will remain virtually dead in coming months and stage only a modest and partial rebound over the next year and a half. We also expect some of the spillover that we have seen recently in prime jumbo mortgages to persist for a while, though the effects on housing demand from this part of the market are likely to be much smaller. Moreover, in contrast to the *partial* recovery in nonprime mortgage originations, we are expecting a *full* recovery in jumbo mortgages to occur by early 2009. Obviously, our estimates of the effects emanating from nonprime and jumbo markets are subject to considerable uncertainty—in terms of both depth and duration.

As for the rest of the economy, we don't think it will escape entirely unscathed by the recent turmoil in financial markets, and we have made some modest downward adjustments also to business investment and consumer spending. In particular, we have marked down a bit our forecast for nonresidential construction on the expectation that higher borrowing costs and tighter underwriting standards will hold down the volume of commercial real estate lending and construction activity in coming quarters. In that regard, we have already seen some increase in "busted contracts" for commercial property transactions. Like the effects in residential mortgage markets, the restraining influences on commercial construction are assumed to fade by the end of next year. We have also revised down our projection for equipment spending, but here the story is a bit different because we are not really anticipating a spillover that will result in significant funding problems for most nonfinancial firms. Rather, in previous forecasts, we had incorporated an extra dollop of spending growth to reflect the general strength of corporate balance sheets and the tendency of some of our models to underpredict equipment spending over the past few years. With heightened uncertainty and less favorable financial conditions, we have moved the E&S forecast down closer to the models in both our August and our September forecasts. Finally, we made a modest downward adjustment to our consumption forecast, in part to account for the likelihood of some tightening of terms and standards on consumer lending and for the possibility that weaker home prices may make it more difficult or expensive for households to finance consumption through the equity in their homes. We also assume that there will be some hit to consumer sentiment in an economy with a weakening labor market, ongoing strains in financial markets, and continuing downbeat news on house prices, home sales, and foreclosures. The restraint imposed by these factors is assumed to fade over the next year—again, on much the same schedule as we are expecting the financial restraints to lessen.

I think we have the sign right here, but I must admit that this element of our forecast seems the most problematic to me. To be sure, we've already seen a fall in consumer sentiment that, if sustained, would imply a drag on spending going forward that is at least as large as is incorporated in our forecast. Still, the direct fallout of recent developments for the cost and availability of consumer credit could be quite limited, and consumer sentiment could recover more quickly than is assumed in the baseline. I would be more worried about the upside risks of this aspect of our projection if I didn't also see some sizable downside risks to other elements of our baseline forecast. First, even with the 5 percent decline we have projected over the next two years, house prices will remain at historically high levels relative to rents. With foreclosures increasing, there is a clear risk that the drop in home prices could well be deeper and faster than we expect. Second, implicit in our forecast is the assumption that we are experiencing the worst of the financial turmoil now; there would seem to be more downside risk than upside risk to this assumption. Finally, we are still projecting what amounts to a very soft landing: The unemployment rate rises by a few tenths, growth converges to

potential, and inflation levels out near current rates. Such an outcome would be nearly unprecedented.

Turning to our inflation forecast, we did not receive any news that materially affected our outlook. Both headline and core PCE prices in July came in a bit lower than we had been forecasting. For the most part, the key conditioning factors governing our inflation projection changed little over the intermeeting period. Food and energy prices were nearly unrevised; nonoil import prices were a touch lower, reflecting lower commodity prices; and most measures of inflation expectations have been roughly unchanged. The only adjustment of note in our inflation forecast was the  $\frac{1}{4}$  percentage point reduction that we made in our estimate of the NAIRU. We did so because of some tendency of our wage and price equations to overpredict inflation over the past few years and because we've seen a continuation of some of the structural forces in labor markets that we thought had lowered the NAIRU in earlier periods. The adjustment also better aligns our estimate of the NAIRU with other readings of labor market tightness.

All told, some slack in resource utilization now emerges in this forecast. However, because the estimated slope of our aggregate supply function is quite flat and inflation expectations are expected to remain reasonably well anchored, this change is pretty small potatoes for our price forecast. Indeed, it trimmed only 0.1 percentage point from our forecast of overall and core PCE price inflation in both 2008 and 2009. That concludes my tour of the sausage factory. I hope it was somewhat revealing, though I recognize that sausage factories can test the convictions of even the most ardent proponents of full transparency. Karen will now continue our presentation.

MS. JOHNSON. In the International Division, we, too, were challenged to assess the avalanche of events and information that arrived during the intermeeting period and to make our best judgment as to how these developments would affect the rest of the global economy and the U.S. external sector. One striking feature of the baseline forecast that resulted is the difference between prospects for the industrial countries and those for the emerging-market economies. For the industrial countries, the surprises in the latest data were generally negative, and considerable financial turmoil has been evident in the markets in the euro area, the United Kingdom, and Canada. In contrast, the most recent surprises in economic data for the emerging-market economies have generally been positive, and so far there has been little evidence of financial disruption in those countries. We have revised down total foreign growth a bit less than  $\frac{1}{2}$  percentage point for the second half of this year and  $\frac{1}{4}$  percentage point for next year. This downward revision is due entirely to revisions to projected average growth in the industrial countries.

The foreign industrial countries are largely being spared the direct effects of contraction in the residential construction sector so far. But they are vulnerable to negative effects on the pace of overall economic activity from increased volatility and impaired functionality in financial markets. As market participants have demanded

higher returns for risky assets and have withdrawn from some exposures, many asset prices in Europe and Canada have fallen sharply. As in the United States, these developments have had implications for bank balance sheets and earnings, as banks have experienced calls on lines of credit or have taken other steps in response to funding difficulties of conduits and other entities sponsored by them. Some markets have experienced severe disruption, particularly European ABCP and a portion of the Canadian ABCP market. Although it is too soon for us to have actual data on the consequences of stresses being put on bank balance sheets, we think it is likely that some constraint on credit extension will result. In addition, business and consumer confidence could well be impaired by the general awareness of heightened risk and uncertainty as strains persist in financial markets. We have very little historical experience on which to base a projection of the magnitude of these effects. Our downward revision of the forecast for real GDP growth in the industrial countries in response to recent financial market events has been small, but we acknowledge that recent financial events have been severe and have lasted long enough that they likely will have some effect on domestic demand in the affected countries.

Other channels of transmission from developments over the intermeeting period are more straightforward. The downward revision to U.S. real output growth causes us to lessen projected export demand growth in our trading partners; for Canada, this channel could be particularly strong. In exchange markets, the intermeeting period has seen upward pressure emerge on the euro, with the dollar-euro rate reaching new highs. This euro appreciation should weaken demand by other countries for exports from the euro area. The downward revision of real growth in the United States and in other industrial countries should, in turn, reduce demand for exports from emerging-market economies.

Economic indicators of activity from months before August have also led us to revise down projected growth in the major foreign industrial countries. In Canada, both retail sales and real manufacturing shipments fell in June. In Japan, second-quarter real GDP growth has been revised to show a decline of more than 1 percent at an annual rate, and industrial production and real household expenditures fell in July. In the euro area, some moderation in expansion is implied by recent data: Real GDP decelerated in the second quarter, and a number of measures of business sentiment, some of which contain responses after August 9, have moved lower. Taking all this together, we revised down our outlook for real GDP growth in the foreign industrial countries, with the change for the second half negative  $\frac{1}{2}$  percentage point at an annual rate. Accordingly, we now expect that monetary tightening measures in those countries this year and next, which we and the markets had been projecting in August, will not occur except in Japan.

The upward revision of our figure for average second-quarter real GDP growth in the emerging-market economies from 6 percent at an annual rate to about  $7\frac{1}{2}$  percent is indicative of the magnitude of positive surprises we received about activity in these regions. The news was broadly based across Asia, Latin America, and other areas. Importantly, at the time of the August Greenbook, we had already received data on

China's nearly 15 percent real growth in the second quarter, so the developments underlying this upward revision arose outside China. Our forecast calls for real growth in the emerging-market economies to slow to a more sustainable pace of nearly 5 percent over the forecast period from the very rapid second-quarter outcome. We judge that, going forward, the upward boost provided by faster activity earlier this year is about offset by the implications of the weaker outlook for the United States and other industrial country economies, and so our projection for real expansion in the emerging world is about unchanged from August. At this time, we do not see sufficient evidence of financial stress in these countries to warrant incorporating into the forecast restraint from credit channels or from confidence effects.

We do recognize that there are risks to the moderately strong forecast we have for the emerging-market economies. On the upside, with the pace of growth so strong in China, we may once again find that the government is unable to put in place sufficient restraint to cause a discrete step-down in real output growth there. However, Chinese stock prices have continued to rise very sharply, and we see a possible downside risk to growth from a bursting of that bubble with consequent effects on real spending. It is also possible that we are underestimating the spillover of contractionary pressures from the industrial countries onto activity in the rest of the world. For example, one channel by which such forces could weaken activity in Mexico more than we now expect is through reduced remittances. With the U.S. construction sector particularly weak, earnings of immigrant labor and remittances to Mexico could be reduced, and the result could be a slowing of growth in Mexico by more than we have forecast.

Another element of the forecast worth a brief mention is the price of crude oil. The price for spot WTI recently surged above \$80 per barrel as recent data on U.S. inventories and some signs of hurricane activity led market participants to bid up prices for very near term oil. However, prices further out on the futures curve have moved down since August, and our overall path for the price of U.S. oil imports is little changed to down slightly by the end of 2008. With the futures curve showing pronounced backwardation, the spot price is very sensitive to unfolding news. Should a serious hurricane or some other factor threaten near-term production, we could see an outsized reaction in the spot price of crude oil.

With the shock to the global economy this time arising largely in the U.S. economy, it is fitting that we might look to the rest of the world to provide some support to overall demand, some contribution to stabilizing global economic activity in general, and some help in damping rather than augmenting fluctuations in U.S. economic activity. As we now read the evidence, such an outcome is likely this time. Strength in the most recent data has led us to revise up projected real export growth in the third quarter. Although foreign GDP growth has been revised down a bit, thereby weakening exports, the dollar is on a path slightly lower than in August; and relative prices should provide a bit more boost to exports than we previously thought. All in all, the contribution to U.S. real GDP growth from exports should be somewhat more positive over the forecast period than we expected in August despite the global financial turmoil. If the Greenbook forecast is realized, net exports should make a



positive arithmetic contribution to U.S. real GDP growth of about  $\frac{1}{3}$  percentage point during the second half of this year and about  $\frac{1}{4}$  percentage point next year. Brian will now continue our remarks.

MR. MADIGAN.<sup>2</sup> I will be referring to the table in the package labeled “Material for FOMC Briefing on September Trial-Run Projections.” I will first focus on the near term. The upper panel of the table shows the forecasts for the second half of the year that are implied by the estimates that you submitted for the first half of 2007 and your projections for the year as a whole. Participants revised down their expectations for real GDP growth in the second half of 2007 by several tenths of a percentage point. Most of you cited the steeper-than-expected downturn in housing markets and tighter credit conditions as key factors. The downward revision to output growth was accompanied by a slight upward revision to the unemployment rate. Your forecast for total inflation in the second half of this year was revised down noticeably, but the central tendency for core inflation was unrevised. Almost all of you conditioned your outlook on near-term monetary policy easing. A slight majority characterized the Greenbook’s assumption of a 50 basis point near-term reduction in the target funds rate as appropriate monetary policy, but almost as many think a somewhat larger cumulative decline will prove appropriate.

The lower panel shows your annual forecasts. The central tendency for GDP growth in 2008 was revised down about  $\frac{1}{4}$  percentage point and now centers on about  $2\frac{1}{4}$  percent rather than  $2\frac{1}{2}$  percent. The central tendency for the unemployment rate at the end of the year revised up 0.2 percentage point. Your total inflation forecast for next year edged down 0.1 percentage point, but the central tendency of your core projections was unchanged. You also again characterized your views of uncertainty relative to historical norms and skews. Those views presumably apply primarily to the relatively near term outlook. Most of you again see risks to growth as tilted to the downside. In contrast, almost all of you now see inflation risks as roughly balanced rather than as tilted to the upside. A majority of you judge that the uncertainty attending the prospects for economic activity is greater than has been typical in the past.

Looking further ahead, the projections for 2009 changed little. For the first time, you submitted forecasts for 2010. The forecasts for those years and your commentary suggest that most of you see actual and potential GDP growth over that period at around  $2\frac{1}{2}$  percent, a bit above the staff’s estimate. The unemployment rate hovers just below 5 percent. (Let me note at this point that in the table there is a typo in the 2009 column for the unemployment rate. The central tendency of August projections should read 4.7 to 5.0 percent.) With the unemployment rate just a bit above the  $4\frac{3}{4}$  percent that a number of you have identified as your estimate of the NAIRU, both core inflation and total inflation are expected to edge lower in the out years—at least if you squint hard and focus particularly on the lower bound of the central tendencies. [Laughter] Your forecasts for core and total inflation in 2009 are essentially unrevised—not surprisingly, if you view those forecasts as reflecting to an important

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

degree your longer-run objectives. The relatively narrow central tendencies and ranges for total and core inflation in 2009 and 2010 suggest substantial agreement in your views on this score. That concludes our presentation.

CHAIRMAN BERNANKE. Thank you. Mr. Stockton has been reading Upton Sinclair, I think. [Laughter] Questions for our colleagues? President Evans.

MR. EVANS. Dave, your presentation seemed to hit on all the right points with regard to the forecast. I am reminded, though, that Chicago is no longer the hog butcher capital of the world. [Laughter] Still, I have a forecasting question. In the briefing yesterday, you quantified the financial stress effects on GDP growth that you talked about this morning as about ½ percentage point in the second half of this year and about ½ percentage point in 2008. Having read the alternative simulations for a number of years, I know it is not uncommon for an alternative that starts off with financial difficulties to have a small effect on the outlook, then there is a layering on of the consumer sentiment and it drops off a little more. So I am curious about sorting out these components with an idea toward, if the policy action were taken as a form of insurance against these risks, what the early warning signs that those insurance reasons are really no longer critical would be. Would we quickly see objective measures of the turnaround? Is consumer sentiment the key? Presumably, financial conditions would be a little more evident in their improvement.

MR. STOCKTON. In this particular forecast, the housing revision is basically all driven off our assumptions about the difficulties in financial markets. There are no additional sentiment-type effects there. On commercial real estate, I'd say pretty much the same thing. As I noted in my briefing, the area where we have ventured into a looser sort of approach would be on the consumer spending side, where we are not really expecting a significant amount. We would expect some restraint on consumer lending and consumer borrowing associated with

tighter underwriting, so there will be some increase in cost. But I don't think those effects are likely to be large. Here we are relying more on an assumption that some disturbance to consumer sentiment will persist into next year. One thing that I would be looking for—for that piece of the forecast to be wrong and, therefore, for there to be more underlying strength in the economy—would be a quicker rebound in consumer sentiment and a moving up to the low 90s in relatively short order. That piece of what we built into the forecast would look to be questionable and might be worth a couple of tenths on the level of GDP next year.

The other area where I would be looking if I were in your shoes and auditing our forecast is that we are expecting the labor market to be quite weak moving into the fourth quarter and, by the end of the fourth quarter, no employment growth, basically flat employment. Thus far, we have seen some uptick in initial claims for unemployment insurance. That seems consistent with some of the slowing that we have already seen. But I think we would have to see a further rise there to be consistent with the weakness that we are expecting in the labor markets. If that were not to occur, it would suggest, again, that we are likely to be off the mark on the weakness in activity that we are projecting. So I would say that those two areas would be at the top of my list for monitoring the weakness of the forecast.

The factory sector would be the final area where I think, again, we get relatively timely information—some of it physical product data, not just data based on the labor market. We are expecting things to be a little weaker than they were in the middle of the summer but not so weak as they were in August. However, if we saw continued strength there, I think that would suggest some inconsistency with the weakness of our forecast.

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. My first question was very much related to what Charlie just asked. First let me say that I appreciate the tour of the sausage factory. It was a little bloody, but I want to commend you in that I think it was a fairly balanced way of looking at what the risks are in various places. But I want to come back to my interpretation of what you just said. Your answer to President Evans sounded to me as though a significant part of your downward revision, particularly to consumption, was the factor of consumer sentiment, which is looming rather large in this forecast. While you've revised down some other things, it sounded as though you were saying that consumer sentiment is a particularly sensitive and difficult thing to forecast. We know it is very volatile; it can change rapidly. But I heard you say that in the forecast you have implicitly reduced consumer spending and held it low for a period of time into the forecast. Am I misinterpreting your answer there?

MR. STOCKTON. That is basically correct. I mean, we expect some recovery. We weren't expecting that August figure to prevail through the forecast period. If that were to occur, we would be looking at an even weaker outlook than we are seeing. Again, in all these things, I don't want to make it sound too precise, but we do think underwriting standards and the cost of consumer credit are likely to increase, and that rise is likely to impinge on consumer spending. In our models, the fed funds rate shows up in our consumption equation. We have some consumption equations that we run with consumer credit rates. They don't actually do any better than our standard equation. So we have added a little for something that we think is outside the model on consumption, probably operating through the credit channel. But I don't want to deny that in some sense, again, if we saw a significant rebound in consumer sentiment from its current levels into the low 90s, it would be inconsistent with what we are currently forecasting.

MR. PLOSSER. That would be a significant change from the standpoint of how you are viewing the forecast.

MR. STOCKTON. That would raise the forecast, as I said.

MR. PLOSSER. My impression from studies and empirical work is that consumer sentiment usually is a much bigger coincident indicator than it is a forecasting tool.

MR. STOCKTON. Yes, it helps for forecasting near-term consumption. But you are right, I don't think the low level of consumer sentiment that we have seen through the middle of September is telling us a great deal about where consumer spending will be early next year. There is not a lot of predictive content that way.

MR. PLOSSER. Yes. That's really my point.

MR. STOCKTON. Therefore, in some sense, to be consistent with the forecast, we would have to continue to expect that consumers are going to be worried and more downbeat. Again, while I would say that's obviously a significant source of uncertainty, I don't think that's necessarily unreasonable in an environment where there will continue to be a lot of bad news and where the bad news is compounded with a weakening labor market and some things that could lead to some extra-model type of restraint.

MR. PLOSSER. I appreciate that clarification. The other question I had has more to do with the NAIRU and employment issues. I wish you could clarify a bit for me—the downward shift in employment numbers for the past three months is for me significant. At the same time, I say to myself, “Well, you know, now it is about at the level that the Board has been forecasting all along.” In your previous discussions you have talked about participation rates and other things, and now the level seems to be about where you had been predicting it all along. Yet you still interpret that as bad news from the economy point of view. So I would like a little

discussion of that. The second thing is that, at the same time, you have lowered the NAIRU. I am a bit puzzled and would like a little discussion about the interaction between those two things. Finally—and you may have said this, but I may have missed it—if you had not changed the NAIRU, would inflation have been 0.1 or 0.2 percentage point higher over the forecast period? Or what would it have been? I just need a little clarification.

MR. STOCKTON. On that last point, I think it probably would have been a little higher. But if we hadn't revised the NAIRU, we might also have had a higher unemployment forecast going forward. It wouldn't be just like "everything else equal" if we lowered the NAIRU. I think it did contribute to a slightly larger output gap in this forecast, but also contributing to the larger output gap in this forecast was a weakening of activity relative to potential that we are assuming is going to be driven by this. We are really splitting hairs because, as I indicated, we changed the forecast only 0.1 in each year, but it would have been a little less than that had we not changed the NAIRU.

On the first point about our interpretation of employment, I was trying to convey a sense that a lot of people were very surprised at how weak employment was. We have been expecting weak employment. I think we were less surprised. We also, as I indicated, had written off some of this weakness in employment as sort of extracyclical labor hoarding, and we hadn't really bought in fully to that. We let that show through in lower labor productivity. Now that we have actually seen some of the weakness that we were expecting all along, we don't think there was as much labor hoarding as we previously thought. So it wasn't as big a surprise. Still, there is just no denying the fact that the labor market report was weaker. Even if we had gone back to where we were, we weren't expecting things to be that weak. So I think there was some small negative

signal attached to the labor market report but probably not as much as would be suggested by the market reaction.

MR. PLOSSER. Thank you.

CHAIRMAN BERNANKE. President Poole.

MR. POOLE. Thank you, Mr. Chairman. What do we know about the likelihood of an auto strike, what might come out of it, and how long it might last? Second, Karen, my sense is that the financial markets in the United Kingdom are probably the most disrupted of any of the industrial economies. Perhaps you could comment a bit more on that.

MR. STOCKTON. So thus far—unless something has happened while we have been sitting here that I don't know about and you do—I think things look reasonably encouraging on the labor front with the auto negotiations. We are not expecting a strike; in fact, we are expecting them to work through the final details. Obviously, the creation of the trust fund for health expenditures is one of the biggest remaining issues. But the fact that it is still on the table and is still being actively discussed leads us to think that a strike is not likely at this point.

MS. JOHNSON. The situation in the United Kingdom is an unfolding drama that is just a soap opera in many respects. At the root there seem to be some severe differences of opinion of what the right response is to situations in the markets. In the beginning, there was virtually no explicit action by the Bank of England to counter heightened demand for liquidity on the part of banks in U.K. markets. So the spreads of overnight pound LIBOR, relative to target, opened up widely, and they were not addressed. They were allowed to just sort of sit there. The term pound market had a problem, too. Of course, many of the dollar issues that we have spoken of—and that Bill talked about—are really being captured as a London phenomenon. But you might say that, from the point of view of the Bank of England or the U.K. economy, these dollar issues

are somewhat separate from the domestic economy. There is some truth to that, but also the institutions are involved, the institutions have obligations, and the shocks to the institutions reverberate back into the domestic economy, it seems to me. That process went on for a while, and it is to some degree a function of the way the Bank of England manages its reserves and the system of reserve market interaction that exists. It has, among other features, a monthly timetable, not a two-week timetable; so even though the Bank of England operates daily in the sense that we do, it ties its own hands a bit each month. Toward the end of the month in which August 9 occurred, it announced that the subsequent month it was going to ease things just a bit in response to a lot of pressure both perhaps from disagreements inside the bank and criticisms of the bank. It has taken some steps to provide for greater flexibility within its existing system than it had for the three weeks before the month turnover in August. Indeed, the Bank of England did a two-day operation last night, or this morning U.K. time, which is the first temporary extra injection of reserves it had done on this basis. So it is moving in the direction of introducing flexibility into the market that was not there on August 9 and wasn't there for some time after August 9.

I think there is a great concern in the Bank of England, or certainly in the person of Mervyn King, with the moral hazard aspects of enabling the markets to solve their problems and deal with the consequences of their own decisions by the Bank of England's providing them more liquidity. That lies behind some of his reluctance. On the other hand, we now have the Northern Rock issue. That is somewhat distinct from the problems of overnight lending or even term lending, in that Northern Rock has been questionable for a while, has been looked at for a while, has been kind of talked about a bit, but has not really been on anybody's radar screen for a while. It is an institution that funded itself to an exceptional extent in wholesale markets as



opposed to from a deposit base, and yet it had grown to be a very, very large mortgage lender in the United Kingdom. One might say that it is a bad coincidence that somehow Northern Rock hit a turning point this month, but that is perhaps going too far. I think the fact that the wholesale markets were disrupted had to interact with its business plan, had to be part of the reason that concerns that have been festering for a while became acute, and so forth. The actions that the Bank of England took with respect to Northern Rock were really from its lender-of-last-resort institution-based mechanisms as opposed to market concerns. But they came out basically on the same day. They announced that they were going to introduce flexibility into their reserves management system, and a different announcement was all about Northern Rock. They got it wrong on Northern Rock, quite understandably. That, too, was a function of their deposit insurance system, which is now under review because it is prone to this sort of thing. It was just, if you will, one thing after another, all of which are interacting.

We have revised down somewhat our U.K. GDP forecast. In general, the industrial countries are where we see the weakness. That economy was, in terms of domestic demand, pretty strong. We think it can absorb some of this. But the set of factors is very complex—some of them are deep and structural, like the way they do deposit insurance; some of them have been ongoing for a while; and some of them are related to this crisis. I think the differences of opinion among the Financial Services Authority, the Treasury, and the Bank of England aren't helping, the differences of opinion within the Bank of England aren't helping, and the situation remains to be totally sorted out.

CHAIRMAN BERNANKE. I see a two-handed intervention.

MR. MISHKIN. Yes. Just a question, really, for Bill and Brian. One thing that is positive about all of this—although maybe I'm wrong about it—is that the spillovers into the

other markets outside the United Kingdom have been very, very minor. Normally, what's happening in the U.K. context would be an information shock that could trigger problems. The good news here is that, if anything, the markets have actually gotten a little better since this whole episode occurred, and it has been contained in the U.K. context. Is this a fair assessment?

MR. DUDLEY. Yes, I agree with that.

MR. MISHKIN. It is really an important issue.

MR. DUDLEY. Three weeks ago, if this had happened, I think there would have been a different market reaction. The market reaction has been very mild. They seem to be able to sort it out as a specific problem pertaining to Northern Rock and the U.K. regulatory regime, not something that applies to a broader market. So I agree with that.

MS. JOHNSON. But, I have to say—as when President Fisher asked that question about whether we know what we don't know, to which, of course, the answer is always “no”—[laughter] five days ago, I wouldn't have brought up Northern Rock. So, I can't promise you that there aren't—

MR. FISHER. Previously Newcastle, should have been called Sandcastle. [Laughter]

MS. JOHNSON. The Spanish banks, for example, and the Spanish mortgage market are places, if I were going to dig deeper and look for hidden problems, that are a possibility.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. I won't ask a silly question like the one I asked before. I just have two quick questions, one for Dave, and the other for Karen. When we look at the labor situation, from an analytical standpoint, it seems to me that there is cognitive dissonance between that and what we are hearing anecdotally. What I'm hearing anecdotally—and I will talk a bit about that in a minute, but I'd like your viewpoint—are still complaints about labor shortages, from bank

tellers to chemical workers to hotel maids, et cetera, et cetera, et cetera. You see it in the Beige Book. You hear it from the CEOs with whom I've talked. You see it District by District. How do you square these two corners, Dave? That's my question for you.

Then, for Karen, my question is this: You talked about the non-industrial country growth. I would submit, by the way, that those are the industrial countries now in terms of how they are fueling their growth; what we call "industrial" countries are service-driven economies. Setting that aside, you talked about the impact on growth, and you mentioned oil in particular. I would like to get your views on the potential inflationary impact from the kind of demand growth that we are seeing and the growth that you are projecting elsewhere in the world.

MR. STOCKTON. The way I square the corners is that, even by our estimates, the labor market is still tight. The 4½ percent unemployment is still below the 4¾ that we are estimating the NAIRU to be. Even on our forecast of the labor market, the unemployment rate doesn't get to the NAIRU until the middle of next year. So it wouldn't surprise me if some complaints about availability of labor linger for a while here. The labor market, even with our weak employment forecast, only gradually begins to loosen up. Really not until next year would we have something approaching an equilibrium in the labor market and then beyond that before we got some slack. I think there is sort of a level versus a change issue here. The current state of the labor market is tight, even though we are forecasting it to deteriorate going forward.

MR. FISHER. Thank you.

MS. JOHNSON. I think there are some inflation risks out there. In general, Mexico, say, or Brazil—some of the countries that target inflation—are operating pretty near their target, maybe even a tiny bit above it. One of the pre-August but sort of persistent problems we have been facing for about six to nine months, maybe even for a year, has been to understand food

prices. Why does everybody say that our inflation is up but it is food prices? Sometimes it's hog disease in China, and sometimes it's an allusion to biofuel issues or other kinds of one-off things that you might see in some emerging-market countries. But the strength of demand in these economies—and Asia is really operating at a very high level of capacity and at a very strong growth rate—raises the potential for upward pressure on prices in some of these countries. Now, China is obviously an outlier in this regard, right? The numbers are crazy; the numbers aren't trusted. Again, the government says it is food. But if most of the food is domestically produced and food is approximately one-third of the weight in their CPI, maybe that's where you ought to look. The most important thing you can do with respect to trying to achieve an inflation objective would be to do something about food prices, either by addressing your supply-side policies or by doing something about the rate of money growth or both. So China is a unique case in this regard. I think people are very skeptical about some of the data. People fear that the inflation problem might be even worse. It has always seemed to me that the obvious solution to China's problem is to let the exchange rate rise. It would solve many, many ills, including lowering food prices and getting the inflation rate down. I don't hold out much hope for that.

In places where markets are more effective and where monetary policy works in ways that look more like our experience in the service-sector economies, we are probably going to see some monetary tightening continue to be in place. Some of those countries are experiencing a little exchange rate appreciation, and that will help. But I think they are operating with as much inflation as they really want. The industrial countries probably won't be doing some of the tightening that we had in mind for them and that the markets anticipated, but some of these emerging markets—India, for example—need to continue tightening, and they need to be very

alert on their monetary policy. There could be some cases in which their policies aren't able to do the job or they don't move quickly enough.

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

CHAIRMAN BERNANKE. Other questions? If not, we are ready for our economic go-round. For President Evans's benefit, we do have two-handed interventions as a possibility. It's like the discount window—rarely used but there if you need it.

MR. KOHN. Is there a stigma, Mr. Chairman? [Laughter]

CHAIRMAN BERNANKE. There's no stigma. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. As far as where conditions are today, I'll keep my remarks short since they don't differ a great deal from the Greenbook, Part 2, and the remarks of others. On the District itself, our District continues to do economically well. Energy obviously is a strong factor. For agriculture, we have even adjusted the earnings numbers up dramatically since February. Manufacturing has shown strength in August, and services seem to be good. The surveys we're doing also suggest those are continuing to do reasonably well. My outlook in terms of what the reaction is or what we're seeing in the economy for the national economy is not unlike that, except that the data are more mixed, as described by others. So I won't go into that.

The issue is not so much where we are. It's where we're going to be six and nine months from now, and the issues around that are issues of uncertainty. Banking conditions in our region, and I think more broadly, are good. The issues there, as we will talk about later, are issues of balance sheets, liquidity, and such things, which are important considerations to the economy going forward. That will be an important discussion. As we survey our businesses looking forward, we see the effects of some of the uncertainty where people, in a broad cross-section, are saying that they have not pulled back on their capital spending or in their hiring plans generally but are in a

little more of a wait-and-see mode. So there is a tendency to want to hold back, and the effects of that are really up in the air. I think that's important for us to consider. Also, we have seen backing-off from funding commitments that were there. Just like others, we're seeing that as well in our region. As a result, looking forward, we have reduced our outlook, but not anywhere near as dramatically as the Greenbook. I think that we will get through this transition and that the economy has enough momentum that it will go forward if confidence hasn't been lost. So I don't have quite as pessimistic an outlook going forward.

The other element is the inflation outlook, and I think that inflation should remain relatively modest. The thing that struck me is that the real rate has increased as inflation has come down over the past year since we last held, and so real rates are actually tighter. That should have a favorable effect on the inflation outlook and also its own slowing effect in the economy, and I think that will be a very important part of our discussion going forward. With that, I'll just stop for the time being.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Well, Mr. Chairman, with regard to our District, we continue to grow apparently faster than the rest of the country. There are signs of overbuilding, particularly in the multiresidential and some commercial sector areas. I will give you one data point that focuses the mind, and then I'd like to go on to a broader discussion. In the city of Austin, Texas, between 2000 and 2007, fifty condominium units priced at \$1 million or more came on the market. Over that seven-year period, forty of them sold. There are now more than 560 coming onto the market. We have seen a significant boom in construction in all the major cities of our District, and that does give me pause. Nonetheless, we continue to speed along, driven not so much by energy as by medicine and the service sector. So I continue to expect that we will outpace the rest of the country. We are

seeing some decline in terms of advanced airline bookings as they affect our District, but they're not that different from the rest of the United States.

What I'd like to address is the broader issue. Mr. Chairman, I am a little confused as to why we are talking about the economic situation and then skipping a beat before we talk about the proposed discount window facility. I do see the two going hand in hand. I'd like to suggest that we're navigating a very narrow passage here in something of a fog. David, I think, was honest about that. On the one side is a serious risk of overcompensating in our navigational course and incurring a moral hazard or overcompensating for what is a perceived risk in uncharted waters. On the other side, I think we run the risk of biting off our employment growth responsibility to save our inflation-fighting face. So on the starboard shore we hear a siren called "Very Large Financial Institutions," which infer that a reduction in the fed funds rate will rescue them from peril, however self-inflicted that peril may have been and despite the fact that they're well capitalized according to the reports that we have put together. On the other shore, we are relying on navigational charts or uncertain landmarks or—as you said, David—rudimentary tools that are giving us mixed readings. I'm going to argue today that we should ease by 25 basis points, Mr. Chairman—I'm just showing my hand early—and indicate through our words that we might tilt the rudder a bit further if needed. Further, I am going to argue that we should defer discussion of the new discount window, and we can get to that later. My concern is that if we fail to ease, we risk steering into a recession, but if we shift the tiller too radically on the fed funds side, I believe that we risk tacking onto that siren call that I mentioned earlier and that we will indulge rather than discipline risky financial behavior.

What I'm about to talk about I base on a rather in-depth sounding, just to kill the naval analogy once and for all in this discussion. [Laughter] I sent you and the Vice Chairman a list of the people I consulted. It is also based on what we're hearing from our economists in the District

and in our Bank and, very importantly, on what the Greenbook and the Bluebook have said. There is no question that our contacts report a slowing in the pace that occurs through the third quarter, and they do detect a pulling in of the horns in terms of cost controls; budgetary planning; and U.S. capital expenditures as opposed to foreign cap-ex, which they're still planning to expand significantly—all in light of the press given to the subprime debacle, financial turmoil, and just a general sense of caution.

However, there are some very bright spots, and I'm going to go through these at a bit of length because I think they're important to recognize. AT&T, for example, a local but significant company says, "We've had the best quarter we've had on the consumer side, and on the business side it's the hottest August in history." Their average revenue per user has risen for the past two quarters after declining for the past two and a quarter years. Texas Instruments, an international company, reports "continued growth on the consumer side, robust industrial growth"—I'm quoting their CFO—and "strong industrial demand" and is struggling to meet demand. Just to go to the other extreme, Brinker International is a middle-income restaurant chain that employs 120,000 and operates throughout the country. Other than weakness in Southern California and Florida, traffic increases in July and August, seasonally adjusted, were "the best in twelve months." Wal-Mart reports, according to their CEO for U.S. operations, that August was "a perfect retail month." They're experiencing no problems with suppliers and no shortage of supply inventory. They are feeling cost pressures from China, which I'll turn to in just a minute. Disney reports record attendance in their theme parks, very high advanced bookings through next spring, and very strong broadcasting revenues. We are hearing the same from the other broadcasters and companies like Time-Warner, and needless to say, Exxon is a happy place right now. The law firms that we have begun to survey rather thoroughly, reminding ourselves that there are more lawyers than there are



auto workers in America, are experiencing a boom in business. In short, if you take the summary offered by the CEO of Time-Warner, who also sits on a significant bank board, as many people know, he says, "I see softness but not precipitous change, whereas the bank board I sit on keeps yelling 'Incoming.'" From a real Main Street perspective, he said that the changes are marginal.

Now, to be sure, there are some weaknesses being reported. The one utility I talked to at length is TXU. The housing market has left a bit of a slowdown in demand. Hookups by big industrials, however—steel, aluminum, et cetera—are running very good loads according to their CEO. UPS reports that the package line has been flat to slightly up, with a pickup occurring in July and August. The volume declined 0.2 percent in the first and second quarters, yet that's against a "gee whiz" first quarter of 2006. July and August have picked up 0.8 percent. According to their CFO, "We have not seen an impact from the credit crunch." The CEO of MasterCard reports a softening, but nothing falling off the cliff. Then JCPenney, which is a middle-third retailer, sees retrenchment in discretionary spending, the so-called appointment shopping. Their back-to-school season was one of the strongest they have seen recently. If you dissect, say, Cisco's and EDS's data, you see a significant cutback in IT expenditures by financial institutions, which you would expect—what they call the "big box" financial houses, Citi, Morgan, et cetera—and yet, according to John Chambers, rock solid growth in commercial and service-provider categories. In summary, underlying economic growth, from the standpoint of anecdotal evidence from the contacts I've talked to, is stronger than it would appear from the press or from most prognosticators. I think that's one important point to take into consideration.

It is also very important, Mr. Chairman, to think of how people react to what they're seeing. There's no doubt an effort, if you're worried about the future, to tighten up on cost of goods sold and to reduce your head count. Yet everybody is complaining that there's a massive shortage of

labor in every one of the companies I spoke of but one. The other thing is that you change your strategic approach. One relief that's been provided here is that the private equity firms have been taken out so that bids of, say, seventeen times EBITDA, which is an actual case, with no due diligence, are no longer the case. Four of the companies I spoke with are now able to make strategic acquisitions, and they plan to proceed. The point is that the economy is not grinding to a halt. I won't mention lawyers again in this discussion except here, but see how they're being hired now. Akin Gump, very large firms—they are working on strategic acquisitions, and you can see a ramp-up in the volume that's occurring there. So I think that's an important thing to consider.

Another very important point to consider is that price pressures have not disappeared. I believe they are being maintained by global demand. I'm going to give you just a couple of reference points, and then I'll stop. As you know, I like to quote the Panamax shipping rates. When we last met, the spot daily rate for a Panamax ship—again, the dry bulk carriers—was \$59,000 a day. Yesterday, it was \$70,000. Port utilization is running at a record high. Why? Asian demand. After ten years of deflation, the major retail sources from China, according to Wal-Mart and other interlocutors, report cost increases running at 2 to 4 percent. After ten years of deflation, they're now inflating slightly. (Although I said I wouldn't mention lawyers, but just so you know, for the first time in history in Los Angeles, New York, and Dallas, all beginning lawyers start at \$160,000. I think they are raising it to \$180,000 in all markets.) Sara Lee—from an agflation standpoint I think this is important and I think we have to be aware of the public perception—just announced a 5 percent increase in the cost of bread, and they announced that they “may hike another 5 percent at the end of the month.” The spread between wheat and corn, Mr. Chairman, is the widest it has been. It is usually \$2.00 to \$2.50; it is now \$6.00. Cooking oil prices, milk prices—even the Italians went on a one-day strike to protest the price of pasta. It wasn't successful, but that's what

they did. The firms respond by “weighting out” the increased prices by putting less in the package here in the United States. I want to mention again that we’re hearing widespread reports of labor shortages, and I do worry, Dave, that it somehow just doesn’t square. I think your report certainly was elucidating, but it does have implications for how fast consumption can fall off, if indeed we’re suffering from a labor shortage. Finally, there are price pressures that ensue from the booming construction markets in China. Chinese demand for skilled labor last year, year over year, was up 100 percent. They’re building a huge shipbuilding market and so on.

So, Mr. Chairman, I am concerned, first, that while we have made progress by any measurement, including our beloved trimmed mean measure of the PCE in Dallas, that we’re just beginning to make such progress and that there are risks out there and we need to acknowledge them. They stem largely from global demand. Second, I’m very concerned that we’re leaning the tiller too far to the side to compensate risk-takers when we should be disciplining them. So I’m going to conclude not with a sailing analogy but with a football analogy. I don’t think it’s time to throw a “Hail Mary” pass. I think it’s time just to continue to move up the field, running the ball as we’ve been doing, and I would strongly recommend a rate cut of only 25 basis points and no more. If, indeed, we accompany it with a change in the primary credit facility, then I think we have to have a very serious discussion of how far we’re willing to go on the fed funds rate. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. The news about the Italian strike is concerning me considerably. [Laughter]

MR. FISHER. It didn’t work.

CHAIRMAN BERNANKE. President Fisher, you raised a legitimate issue, which I think I should address now. We will this afternoon be discussing this auction credit facility with a possible

swap that would allow the Europeans to provide term dollar funding as well. This work has been going on for a few weeks. It has been very intensive. The staff has done a great job, but as you know and as Bill explained, the financial market conditions have improved somewhat in the past few days, and so we view it—I view it and I think the Board views it now—as a relatively close call as to whether such a facility is needed at this juncture. What I would propose to do is discuss it as planned on the agenda. We would like to have a thorough discussion and, if the Committee approves the contingent permission, to use it should market conditions appear, in our judgment, to warrant it. But just because, as you point out, there is some interaction with the monetary policy decision, I'd just like to say that, at this point, it is not by any means a certainty that we will go ahead and apply that particular agency.

MR. FISHER. Well, thank you, Mr. Chairman. I look forward to that discussion. I didn't know that. If they are, indeed, tied together, then I would be making a very strong argument against a 50 basis point cut if it were tied at the same time to this facility. So thank you very much for that clarity.

CHAIRMAN BERNANKE. Sure. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. On balance, the data and the anecdotal evidence in our District say that the economy continues to expand and advance moderately, but the pace may have slowed somewhat since June. Readings of our Business Outlook Survey of regional manufacturing have been very volatile this summer. You may recall that in June, our activity index rose to 18, which was its highest value since April 2005. The index fell to 9 in July and to 0 in August. The September survey, conducted during the first two weeks of September, remains confidential and will not be announced to the public until this Thursday at noon—so these are really new data. In fact, we finalized it only yesterday. It indicates some recovery in general activity, new

orders, and shipments. The general activity index rose from 0 to 10.9. New orders and shipments indexes also improved. Another piece of good news from the manufacturers' capital spending plans is that they remain positive, with the index at a level typically seen during expansions. Plans to increase capital spending were common among nearly all the major manufacturing sectors covered by our survey. Consistent with this, our respondents generally see improvements in their business activity coming over the next six months. In September we asked a special question about whether the recent changes in the construction and financial sectors had any adverse effects on their business or their business plans. About two-thirds of the respondents said there was no impact on their orders or shipments. About 11 percent reported a substantial decline. Most of these firms were housing-related industries. One was in auto parts, and one was in apparel. Similarly, three-quarters of the respondents had no change in their capital spending plans, and only about 9 percent expected to cut back substantially on their capital spending relative to plan over the rest of the year. My reading of this is that the manufacturing sector in the region is holding up pretty well.

In contrast, residential construction activity in the region continues to deteriorate, and we are expecting to see declines in house prices. Earlier these declines were seen only at the Jersey Shore, but now they seem to have spread a little more widely in the District. Interestingly enough, homebuilders reported reducing prices to stimulate sales but with relatively little success. Several contacts told us that they were more concerned about the negative effects on buyer psychology of recent financial market developments than they were about the availability of mortgage financing. That our region has been largely less dependent on subprime lending than some other areas may be part of the reason for that. Nevertheless, none of our contacts in the real estate industry were willing to forecast when the demand for housing was going to pick up. Nonresidential construction has also softened somewhat in our region, as indicated by the value of contracts, but that's a very volatile

number. These data tend to be revised up; but the decline still is quite pronounced, and it bears watching. At the same time, vacancy rates remain very low in the Philadelphia area, and so the demand seems to be there, but the contracts are down for the moment.

Employment growth over the three-state region ending in July remains below trend in New Jersey and Delaware and kind of flat in Pennsylvania. Some firms continue to support what has already been said—difficulty in finding qualified workers. One of our board members runs a temporary employment agency that goes through tens of thousands of people every month. She said that there has been an uptick in walk-in traffic of people applying for employment, particularly skilled workers, but in fact, there has been no falloff whatsoever in the demand from firms looking for these people. So she has seen no decline in demand for these workers, but she has seen a little uptick in the supply coming through their office. Our three-state unemployment rate remains relatively low and below that of the nation. Nonetheless, July unemployment rates in our three states were a little higher than we saw earlier in this year.

The inflation picture for the District has changed little since our last meeting. Wage increases have been moderate. Several firms report large increases in benefit costs but not an acceleration of those benefit costs. The prices of industrial goods are increasing, but retail price increases haven't been as widespread as they were earlier. In summary, our region's inflation has not accelerated. It hasn't decelerated either.

Economic activity in the Third District continues to expand, but its pace has perhaps slowed somewhat. Our business contacts generally expect activity to remain slow but on an upward trend and are more uncertain about the outlook than they were, but their plans seem to be in place. One board member spent a great deal of time talking to a number of CEOs and CFOs about capital spending plans, and it was funny. He said that they said, well, everybody thought there was going

to be a capital spending program reduction. They weren't planning a reduction, but they knew somebody else who was. It was very hard to find the person who was actually doing it, but everybody thought that someone else was doing it. So it was a little anecdotal.

The national economy looks more vulnerable to me than it did six weeks ago, but it would be a mistake—and I think Dave Stockton did an excellent job of reminding us—to count out the resiliency of the U.S. economy at this early stage. I think there can be a tendency in the midst of financial disruptions, uncertainty, and volatility to overestimate the amount of spillover that they will exert on the broader economy. For example, the rate cuts after the stock market crash in 1987 were reversed fairly quickly. Unfortunately, we have very little hard data as yet to help us gauge the potential size or persistence of the impact on real activity of the August turmoil, and early signs may be fraught with noise and overreaction to headlines. So I think we have to be very careful.

Of course, it is possible that disruptions will further restrain the already weak housing market by reducing the supply of mortgage credit. Nonconforming mortgage rates, even to prime borrowers, remain elevated, but conforming rates to prime borrowers are actually lower right now. Reduced lending in the alt-A and subprime market is not a surprise. It has been difficult to obtain those loans since the early part of this year, and I think that is not a big change. The biggest surprise, at least for me, is that the impact on the obtainability of mortgages to homebuyers of the recent disruptions has been in the area of nonconforming jumbo mortgages. Yet the availability of these mortgages and their rates are likely to settle back down more quickly to normal levels since most of the people borrowing at the jumbo rates tend to be closer to prime borrowers than to subprime. However, as banks take some action to bring some of these risky assets back onto their balance sheets, we may look forward to further restraints on credit because they don't want to push their capital ratios any harder than they have, and so that may have a diminishing effect. But putting

aside any financial market effects, signs of stabilization in the housing markets that we saw early this year just have not been sustained, as we all know. Home prices have decelerated and have been falling in certain localities, and that's likely to continue. Incoming data suggest that the downturn in housing may be both more prolonged and somewhat deeper than certainly I had earlier anticipated. The question has been whether this decrease in housing wealth would spill over into consumer spending, regardless of the source of the decrease in housing wealth. The argument has been that the strength in the labor markets and the stock market gains would continue, and continued personal income growth would buoy the consumer and mitigate those declines. I remind everybody that, even though the market is down heavily in August, it is still up roughly 5 percent for the year. So it wouldn't be a tank unless something further happened.

August nonfarm payroll surprisingly fell by 4,000 jobs in August, as we know. I wouldn't be too surprised to see this number revised up. Loss of government jobs concentrated in local education took a very big hit, and this might be overstating the seasonal adjustment factors that are going into this in the timing of the starts of the school year. Still, there was weaker private payroll growth. There's no question about that, and the revisions done in June and July were down substantially. Thus, nonfarm payroll gains have averaged about 44,000 over the past three months, whereas private payrolls have been a little more than 70,000 for the past three months, and that's weaker than we've seen during the rest of the year. There's no question about that.

On the positive side, business spending remains fairly solid, but our hard data are somewhat stale and may be a little sketchy. Although not in the data yet, there's some risk of temporary weaknesses in business fixed investment going forward simply because of the increased uncertainty inherent in financial market disruptions. So far most of the firms we've talked to, as I said earlier, say that their capital spending plans remain in place, and only a few nonmanufacturing firms have



mentioned not canceling but just delaying them until the market has settled down. Risk premiums have increased from abnormally low levels, which is probably beneficial. This has raised the cost of capital for some firms; but for most firms, financing for capital spending remains available. Many banks say that they have lending available and that they will lend to good customers. There's not a problem. Indeed, most capital expenditures by businesses, in fact, are internally financed, and so the turmoil in the credit markets may not have as much spillover on capital spending as we might otherwise expect. So unless there's a sharp decline in business sentiment, which could occur if the financial market turbulence worsens, I don't expect to see that much of a pullback in business investment spending, except possibly in the very, very near term.

On balance, I believe that within the forecast period we can see a return to trend growth, which I still estimate at about  $2\frac{3}{4}$  percent, somewhat higher than the Greenbook. I still think that's the most likely outcome, but I now expect that return to be delayed by a couple of quarters given housing, and it won't be under way until certainly late in 2008. I admit there's still considerable uncertainty surrounding that forecast, and I certainly see that there's a possibility of particularly bad outcomes, some of which the Greenbook scenarios have laid out. I also expect that some of the indicators we receive over the next few months are likely to be weak, but not necessarily weaker than many of us have already built into our new forecasts. Indeed, because of the financial markets disruptions, the August data won't be particularly helpful or useful in reading the trends in the economy.

I think it's going to be crucially important for us to convey to the public that we are forward looking, that we expect to see somewhat weaker data coming in, but that they may not necessitate a further change either in our forecast or in our policy. Only when we accumulate sufficient new information that causes our forecast to deviate from our already lowered projections do we want to

revise our forecast and perhaps our policy. I think this is a point that we need to make very clearly to the public, if not in our statement, which we should try, then in the minutes and in our speeches as we go out. I think it would be detrimental to our cause and to good policy if the public expected us to react to each piece of incoming data.

On the inflation side, I see that recent readings on core inflation have moderated. Headline inflation remains quite elevated. I don't think that we can afford to be sanguine. I continue to see underlying inflation pressures, as has already been articulated. Long-range inflation expectations have been stable, but I'm concerned as we go forward with potential rate cuts. I'm concerned about their remaining stable, particularly when we may be lowering rates without being clear about what our inflation goals are. Indeed, I think the current situation clearly shows the benefit of having an explicit inflation goal. By anchoring those expectations, an explicit goal would mean less of a tradeoff between our two goals and so might make this policy decision easier and even perhaps more effective. Thus, while my forecast has built in some near-term policy easing partly to offset the anticipation of tighter credit conditions, I believe that we might find ourselves in a position sometime during '08 in response to rising inflation of having to raise the fed funds rate back up. We need to be particularly careful now with our communications regarding any policy action we take, but I'll save that discussion for the policy go-round. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. Readings on core inflation during the intermeeting period have continued to be encouraging, and the downward trend has persisted long enough that I've lowered my inflation forecast slightly. With the weaker outlook for growth, I also see less upside inflation risk emanating from cyclical pressures. With respect to economic activity, I've downgraded my forecast for growth in the fourth quarter by about the same amount as

Greenbook and lowered it only marginally, a bit less than Greenbook, in 2008. The downside risks to this forecast are substantial and worrisome. The downward revision to my forecast reflects three factors: first, incoming data bearing on the outlook; second, my assessment of the likely impact of the financial shock that's been unfolding since mid-July; third, the offsetting effect of the policy changes I consider appropriate in response to the first two forces. My forecast assumes that the fed funds rate will fall to about 4½ percent in the fourth quarter. In other words, my forecast is premised on timely actions by the Committee to mitigate much of the potential damage.

Let me begin by commenting on the economic data that we have received since early August. Some has certainly been positive. Growth in the second quarter was revised upward, suggesting more momentum heading into the current quarter, and most indicators of consumer spending and business fixed investment were also robust. Like most observers, I've concluded that these data taken together support a small upward revision in my estimate of third-quarter growth. However, recent data on housing and forward-looking indicators relating to this sector suggest even greater weakness in residential investment than we previously anticipated. Manufacturing activity recently turned down, and importantly to me, the August employment report showed a marked deceleration in payroll employment growth over the past three months, suggesting that the financial shock hit an economy possessing quite a bit less momentum than I had factored into my previous forecast. Moreover, survey measures of consumer confidence are down, and these results probably do incorporate early effects from the recent financial shock.

Of course, the most important factor shaping the forecast for the fourth quarter and beyond is the earthquake that began roiling financial markets in mid-July. Our contacts located at the epicenter—those, for example, in the private equity and mortgage markets—report utter devastation. Anecdotal reports from those nearby—for example, our contacts in banking, housing

construction, and housing-related businesses—suggest significant damage from the temblor. For example, a large furniture retailer with stores in Utah and Nevada has seen sales fall off, and he has tightened credit terms for his customers and has already frozen his hiring and investment plans. In contrast, our business contacts operating further from the epicenter appear remarkably unfazed. Luckily for them and for us, the financial quake has thus far produced at most minor tremors in their businesses. This is not surprising. It is still too early to expect the ripple effects to be noticed by our contacts or to show up in the spending data.

We could take a wait-and-see approach to the financial shock, incorporating its impact on our growth forecasts only after we observe its imprint in the spending data. But such an approach would be misguided and fraught with hazard because it would deprive us of the opportunity to act in time to forestall the likely damage. This means we must do our best to assess the likely effect of the shock. The simplest approach is to rely on our usual forecasting models. However, as David emphasized in his remarks, the shock has not affected to any great extent the financial variables that are typically included in our macro models. Since we last met, there have been only small net changes in broad equity indexes and the dollar. Of course, risk spreads in credit markets are up across a broad range of instruments and for most borrowers, both corporate and households. But there has been an offsetting drop in Treasury rates so that key rates appearing in our models—the interest rate on conforming mortgages and the interest rate facing prime corporate borrowers—are little changed or even slightly lower. It is riskier corporate borrowers and households seeking nonconforming mortgage loans, including jumbos, that have seen their borrowing rates rise over the past few months. But importantly, it is the drop in Treasury yields, about 50 to 100 basis points since early July, that has thus far shielded so many borrowers from higher interest rates, and of course, this drop reflects the market's expectations that the Committee will ease the stance of

monetary policy rather substantially. As I noted, my forecast assumes that we will plan to ease by around 75 basis points by year-end in line with market expectations. Even under this assumption, I see movements in interest rates alone as adding to a modest tightening of financial conditions.

But, of course, an evaluation of the likely economic impact from the financial shock must also take into account changes in credit availability and lending terms even though these variables rarely appear explicitly in forecasting models. It is apparent that the availability of lending of some types, including subprime and alt-A mortgages, has diminished substantially or disappeared entirely. Moreover, banks and other financial institutions are imposing tighter terms and conditions across a broad range of corporate and household lending programs. For example, FICO cutoffs have been raised and maximum loan-to-value ratios lowered in many mortgage programs according to our contacts. In part, these changes reflect the pressures that banks and other financial intermediaries are experiencing in the context of severe illiquidity in secondary markets for nonconforming mortgages and other asset-backed securities, asset-backed commercial paper, and term loans in the interbank market.

Many of the liquidity problems now afflicting banks and other financial market participants will presumably be resolved at least eventually, but it's hard to believe that markets will return to business as usual as defined by conditions in the first half of this year even after that occurs. For one thing, many of the structured credit products that became so widely used may prove to be too complex to be viable going forward, and this would more or less permanently reduce the quantity of credit available to many risky borrowers. Moreover, if the financial intermediation that was routinely conducted via asset securitization and off-balance-sheet financing vehicles ultimately migrates back onto the books of the banks, borrowing spreads and lending terms are likely to remain tighter given current limitations on bank capital and the higher costs of conducting

intermediation through the banking sector. Most important, the recent widening of spreads appears to reflect a return to more-realistic pricing of risk throughout the economy; this development may be positive for the long run, but it will be contractionary in the short run.

Similar to the Greenbook, we've incorporated these financial developments into our projection by revising down our forecast for residential construction and home prices. But as we all know, housing is a small sector, so a major question is to what extent the financial shock will spread to other parts of the economy. We see a large drop in house prices as quite likely to adversely affect consumption spending over time through a number of different channels, including wealth effects, collateral effects, and negative effects on spending through the interest rate resets. A big worry is that a significant drop in house prices might occur in the context of job losses, and this could lead to a vicious spiral of foreclosures, further weakness in housing markets, and further reductions in consumer spending. Several alternative simulations in the Greenbook illustrate some of the unpleasant scenarios that could develop. A final concern is that the uncertainty associated with turbulent financial markets could make households and businesses more cautious about spending, causing some investment plans to be put on hold and some planned purchases of houses and consumer durables to be deferred. So at this point I am concerned that the potential effects of the developing credit crunch could be substantial. I recognize that there's a tremendous amount of uncertainty around any estimate. But I see the skew in the distribution to be primarily to the downside, reflecting possible adverse spillovers from housing to consumption and business investment.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. Most of the economic data we have for this meeting reflect the economy before the liquidity issues in August. The employment report,

while probably not wholly reflective of the problems and affected by some anomalous seasonals, nonetheless provides evidence that labor markets were slowing at the outset of the financial problems. Given the layoffs that are being announced by financial services firms and the potential for continued difficulties in construction, some further easing of labor markets seems quite likely. Although we do not have housing starts and permits for August, the outlook for the second half of 2007 is likely to deteriorate further than forecasters had predicted before the liquidity issues. There is good reason to believe the staff forecast that residential investment will remain weak well into 2008. Stock prices of all the major homebuilders have continued to decline since our last meeting, and the credit derivative swaps for several of the largest homebuilders are at levels that reflect a very high probability of default.

The news from the financial markets has improved marginally from the last meeting, but I still have some significant concerns. Certainly, some of the financial anomalies have abated, such as the extremely low rates for short-term Treasury securities, and there are some tentative signs of improving liquidity. However, these improvements are tenuous, and the ability to raise funds in a number of short-term financial markets remains quite difficult. I would just highlight a few of the financial anomalies that are reflective of the situation. Usually, the overnight Eurodollar trades very close to the overnight fed funds rate. Both are overnight dollar loans between financial institutions on an unsecured basis. Over the past month, the funds for overnight Eurodollars have frequently been trading much higher than overnight fed funds. This highlights the difficulty that some European financial institutions are having borrowing in dollars and the unwillingness of many financial institutions to arbitrage these spreads if they involve credit exposures to European financial institutions, even for overnight. These difficulties worsen when the maturities extend out to one to three months. Both the one-month and three-month

LIBOR rates have remained very elevated, particularly given that the fed funds futures during this period have indicated a market expectation of falling federal funds rates over the next three months. The elevated LIBOR rate tightens credit for a variety of domestic borrowers and could affect areas that are already troubled. For example, many subprime mortgages are tied to the LIBOR rate as are many loans that have been used to finance leveraged buyouts.

A second example is the significant swelling of bank assets in August. The monthly growth rate for bank C&I loans was 2.6 percent and for other loans and leases was 6.3 percent. These are among the largest monthly increases in thirty years. As in other periods of liquidity strain, bank balance sheets become particularly important. As banks honor loan commitments and agreements to provide liquidity support, their balance sheets grow. My concern is that bank obligations will continue to expand bank balance sheets in September and crowd out other investment opportunities.

Many financial market participants are very concerned about the next two weeks, despite some recent easing of conditions. Some investors are not willing to lend except overnight. The asset-backed commercial paper market has remained under stress, and the rollovers have been for shorter maturities. There is significant concern that holders of commercial paper may be reluctant to hold asset-backed commercial paper on their balance sheets at the end of this month, and rumors abound about whether money market funds and other short-term investors will continue to hold commercial paper for structured products, particularly of the SIVs.

So we have a situation of a very weak housing sector, some evidence of slowing employment growth, and a period of extended illiquidity that may get worse before it gets better. The tail risk of liquidity problems and economic problems has grown, and we clearly want to avoid outcomes by which declines in prices for houses and for financial assets tied to the housing



sector could create more-severe economic outcomes. The fact is that we do not have much experience with periods of extended illiquidity, especially when the housing sector is so weak. So taking out insurance against these risks seems entirely appropriate. The decision is made easier, in my view, because I see the risk of unacceptably high inflation resulting from such an action as being quite low. My hope is that with appropriate easing of policy the liquidity issues will abate as we start the fourth quarter.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. The reports that I am hearing from my business contacts reflect a sudden and a significant deterioration in their evaluation of the business climate. The data in hand, except for the troubling August employment report, have not been especially dire, and neither are the impressions I get from the business community regarding their current pace of economic activity. In fact, by most accounts, business activity in the Fourth District, outside of the residential real estate market, remains reasonably positive, and the Beige Book report that we submitted for this meeting reflects that view. In most cases, the sharp downward reassessment of the business situation that I am now hearing from my contacts describes greater unease over what may happen and not what has happened. As we discussed earlier, our forecast models are not well equipped to accommodate the role that shifting expectations play in shaping the economic outlook. Nevertheless, the sharp falloff in business confidence that I am hearing from people in many sectors in the District has had a material influence on the economic projections that I submitted for this meeting.

The market for real estate is still declining, perhaps even in a freefall, according to the descriptions I have been getting from people across the sector, including real estate professionals, developers, and manufacturers of home construction supplies and materials. I

don't pretend to have a very confident forecast of where the bottom of the residential real estate market lies, but the industry sources that I am talking to have convinced me that we should anticipate that this process will play itself out for a considerable time to come. Moreover, and unlike my last report to the Committee, my business contacts are now fearful that we are going to see a spillover from the declines in the residential real estate market, and they now expect some amount of retrenchment by consumers. I have incorporated some of that sentiment into my outlook. The most noteworthy development affecting my economic projection, however, has been the deterioration in business confidence and the effect that deterioration may have on capital expansion plans. The diminished confidence in the outlook that business leaders are reporting to me has had a significant negative effect on my outlook for investment. Like the Greenbook, I have scaled back my growth outlook to reflect a considerably softer trajectory for business fixed investment. Even with a monetary policy response, the combination of weaker consumer and business spending has led me to mark down my GDP projection for next year nearly  $\frac{1}{2}$  percentage point, to 2 percent.

Meanwhile, the incoming inflation report continues to point to a gradual disinflation. The usual caveats about inflation forecasts apply, of course, but I am not seeing in the data—and I am not hearing from my business contacts—the same concern over rising prices that I heard in the spring. My outlook for inflation hasn't changed that much since July. I am still expecting core PCE inflation to be just under 2 percent. But I am more confident, if just a little, that we are seeing the progress toward price stability that we had hoped to achieve.

So I believe that the risks to the outlook, given no change in our policy, have shifted decisively toward potential rapid deterioration in the real economy. Some of that deterioration may reflect the unwinding of earlier financial imbalances, and every prudent effort should be

made to allow that process to run its course. But the moral hazard caveat does not diminish the significance of the falloff in business sentiment that I have heard since our last meeting, and so I am concerned that we have seen greater risk to the economic outlook since our last meeting.

Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. In the Sixth District, we indulge ourselves with the conceit that our District looks a lot like the nation as a whole. We have 45 million consumers and an industrial composition that does resemble the country, so you can process my regional remarks with that conceit in mind. Housing markets continued to deteriorate in August in the Sixth District. Housing market weakness was most pronounced in Florida, as you might expect, followed by Atlanta and middle Tennessee. The consensus view is that the recent tightening in mortgage credit availability will exacerbate the region's housing market problems, and most regional contacts believe that housing markets will continue to weaken, bottoming out no earlier than mid-2008, and some see a much longer adjustment period.

Aside from housing, real economic readings in the Sixth District were mixed. Anecdotal feedback across a number of industries suggested that business spending has not yet slowed markedly, but the majority of contacts indicated that they are now approaching new capital spending more cautiously. That said, most contacts acknowledge that tighter credit standards have not significantly affected business capital investment outlays. Reports of factory activity were mixed, with defense and export industries doing well, while industries linked to housing were predictably weak. Transportation contacts indicated ongoing weak domestic demand. Consumer activity in the District was flat to slightly up in August compared with a year ago. Housing-related home product sales were especially weak, as were auto sales. Perhaps the most

notable change from previous months was a turn to pessimism on the part of directors, reflecting their soundings of business contacts in their communities. I will mention that we have five Branches, so we actually get director feedback from more than forty directors across the District. Sixty percent believe that economic activity will be slower six months out, twice the percentage recorded in July. Even factoring out idiosyncratic conditions in localities such as south Florida and the Gulf Coast, the outlook, based on these anecdotal reports, has turned to the negative.

To summarize my regional comments—current fundamentals are mixed, and the outlook is pessimistic. In our view, the economic outlook has changed since the last meeting, and the balance of risk has clearly shifted to the downside. We do not see a near-term recession as a high likelihood, but we do anticipate that growth will approach trend much more slowly with employment edging up as a consequence. So in direction and tone, if not magnitude, we are in agreement with the Greenbook, but our forecast differs from the Greenbook baseline forecast in the depth of the below-trend growth, ours being somewhat milder because we condition our forecast on deeper cumulative cuts in the fed funds rate over the coming months.

Turning to capital markets, my recent conversations with a number of capital market participants suggest that the adjustment process in financial markets is far from complete. Their anecdotal feedback reflects a range of views about the severity of the current problems and the outlook for stabilization. Here is the overall picture I gleaned from these conversations. Some debt markets have firmed a bit. The leveraged-loan market, for example, is likely to renew trading in the coming weeks, but structured-debt security markets are not yet clearing. The principal reason—and this has been mentioned earlier by Bill and others—that debt markets remain illiquid is weak counterparty transparency and, therefore, uncertain counterparty risk, as well as uncertainty regarding the performance of collateral pools that back securities. The

process of achieving adequate clarity and stabilization of the markets will likely take many more weeks. Markets will remain volatile while the condition of heightened uncertainty persists.

There has been some spillover into markets that are unrelated to structured debt and subprime, but creditworthy borrowers are getting credit. There is sufficient buyer liquidity currently on the sidelines awaiting greater clarity regarding counterparties, market pricing of securities, and the depth and scope of the difficulties. Widespread deleveraging, particularly by SIVs and hedge funds and nonbank entities, is occurring and is likely to continue.

One party argued, however, that all the news of financial distress has not pushed risk spreads to the extremes of historical bands. This party argued, “We are experiencing a painful adjustment from excessively high leverage to more-rational or more-realistic pricing in line with historical averages.” But all contacts believe—and this is perhaps not unexpected—that prolonged credit market problems will affect the broad economy, mostly through the consumer credit channel.

So I believe our decision today boils down to whether we cut  $\frac{1}{4}$  percentage point or  $\frac{1}{2}$  percentage point, obviously in combination with careful wording of the statement that conveys a rationale focused on economic fundamentals while signaling some recognition that the problems in the capital markets have the potential to deliver a credit shock to the broad economy. I consider it appropriate to adjust the federal funds rate to the now-weaker economic outlook, and I support a 50 basis point move with the rationale that at least 25 basis points of that represents recognition of a lower equilibrium rate and the remainder is a preemptive, preventive measure designed to renew confidence, facilitate conditions that resolve uncertainty, and shorten the necessary adjustment timeline in a deleveraging financial sector. It is a fair question whether the process of information revelation—that is, removing uncertainty—will be accelerated by an

aggressive rate cut. My view is that this action, along with other liquidity actions, removes the psychological barrier—that being the concern that the Fed might fail to ensure enough upfront liquidity and might be pursuing an inadvertently tight policy, compounding problems by putting undue stress on the real economy. I think a distinction can be drawn between trying to influence the psychology around dangerous financial sector circumstances and bailing out the markets, and care should be taken to reflect this in the minutes.

Let me add that I agree with the earlier comments of President Fisher that we perhaps should be looking at any policy move in the context of a total package that includes the auction credit facility. So I do have, let's say, some sympathy for the view that the total package must be discussed. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Recent information from the Fifth District, both from contacts and from our survey responses, suggests that growth in economic activity in our District has slowed in recent weeks. The survey indicates that retail sales have weakened, with big-ticket categories such as automobiles and building materials leading the way. Shopper traffic has trailed off somewhat as well. Services firms report slower revenue growth and less optimism about demand going forward.

Activity in some District housing markets has slowed markedly in the past two to three weeks, and some formerly healthy markets are now showing signs of weakness. One contact in Charlotte, for example, says that sales agents there are saying the same things they were saying in Atlanta several months ago. Residential foreclosures are more widespread, though they appear to be concentrated or overrepresented among investors rather than owner-occupants. Mortgage activity has fallen off in the past several weeks, according to our contacts. While

standards have tightened for marginally qualified applicants, it is reported that mortgages remain readily available for creditworthy borrowers. The CEO of a nationwide title insurance company reports that their open orders have been trending down in recent weeks. He also says that they are seeing an increase in cancellations of title insurance orders because people are applying for more than one mortgage in the current climate.

In contrast, commercial real estate conditions appear generally healthy, although recent reports suggest that closer scrutiny is being given to marginal project proposals. Conditions in manufacturing also look positive, shipments and new orders continue to expand, and hiring indicators for this sector have edged higher. District price pressures remain at about the same level they have been in recent months.

Let me say that, broadly speaking across our contacts, we have heard in the past week or two more reports mentioning a sense of gloom. This echoes what Presidents Pianalto and Lockhart said. On the other hand, one contact in Charlotte, who has had a lot of successful experience in real estate markets, said that compared with past crises this is a walk in the park. Maybe that is just because he has made his. It may be particular to this situation, so I don't want to make too much of that.

The national economic data that we have received since our last meeting point pretty clearly to a weaker economic outlook for real growth. The employment report is a prominent example. Slower growth in the months ahead would weigh on income growth and consumption, although the Greenbook's outlook for income remains pretty healthy. Recent reports on housing activity have also been quite disappointing. I think the key question is the effect on the housing market and broader economic activity of the recent financial market turmoil. I won't survey what has happened; Presidents Yellen and Rosengren and Mr. Dudley did an excellent job on

that. I will just comment that it seems, broadly speaking, as if we are on a traverse from a configuration of intermediation that placed a fairly heavy reliance on fairly complicated and structured products and rating agencies' assessments of those. It is a traverse that is obviously going more rapidly and is fraught with more peril than the path that took us to the configuration we are coming from. So it is hard to know how much of an effect this turmoil will have on housing. I suspect that a lot of the slowdown was already in train before the middle of August. I base that thought on the fact that many mortgage rates rose earlier in the summer than August, though the jumbo market is an obvious exception to that.

Beyond housing, any projections of real effects from events in financial markets seem like guesswork at this point. My sense is that, while we may see some marginal slowing in business investment, the effects are likely to be small because I don't think the marginal cost of funding for most businesses has gone up much and we aren't hearing reports of wholesale tightening of lending standards in the corporate sector. I haven't heard that from around the country either. I expect consumer spending to grow more slowly than in recent years, but not too dramatically so. I think that there is a fair amount of uncertainty about the size of the housing wealth effect and that household net worth overall remains fairly high relative to income at this point. As I noted earlier, the Greenbook's projection for disposable income isn't too bad, so that would support consumption growth at least at a moderate pace going forward. Overall, then, I come out a touch above the Greenbook, with real growth about 2 percent in the second half and then gradually returning to trend. Of course, I have been expecting less of a slowdown than the Greenbook for about a year now. It turns out that, although we have both been too optimistic, the Greenbook has been closer to reality, so my confidence in my forecasting ability is waning here.



The inflation numbers have been encouraging. Core PCE inflation averaged under 1.4 percent for the past five months, and overall PCE inflation was under 2 percent for both June and July. I am particularly pleased that TIPS inflation compensation has not increased even as market participants have marked down their expected funds rate path in the midst of the recent turmoil. That said, it still looks as though market participants expect inflation to settle near 2 percent rather than lower, as I would prefer. That concludes my remarks.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. To date, economic conditions in the Seventh District have changed little since our last meeting. We continue to expand at a modest rate, as reported in the Beige Book two weeks ago. Even after accounting for continuing declines in the housing sector, most of my contacts thought the national economy had softened. Outside of housing, they generally reported a modest deceleration rather than an abrupt change in conditions. Retailers thought that continued high energy prices were holding back consumers, but demand was not seen as deteriorating sharply. A similar slowing was reported on the hiring front. For instance, Kelly and Manpower experienced softer demand for temporary workers, but again this was not characterized as a general pullback in hiring. Many contacts added that finding skilled workers remained difficult, as President Fisher mentioned.

In terms of the business outlook going forward, several directors and other contacts noted that many in the business community were apprehensive about the prospects for growth. They were concerned that these worries might soon begin to weigh more heavily on actual spending. For example, in the motor vehicle sector, both Ford and General Motors cautioned that the August sales numbers overstated the underlying strength in demand for vehicles. They thought some selective incentive programs had boosted the sales figures. I asked all my contacts about

the effects of the turmoil in credit markets. Though it is still early, none of them thought that the recent financial turbulence was causing creditworthy nonfinancial firms to have unusual difficulty in finding adequate financing. As several people have said, many business people suggested that the situation is much better than what they hear from financial commentators on Wall Street. Of course, we heard many examples of difficulties from financial market contacts, and several have spoken about that already.

Turning to the national outlook, three broad developments since our August meeting have influenced my views on the economic situation. First, financial conditions have become more restrictive. Second, the incoming data suggest a greater decline in housing and a somewhat weaker labor market. Third, inflation prospects have improved to the point where my outyear projections are within a range that many participants would view as consistent with price stability. These projections embed a path for the federal funds rate that is similar to the Greenbook assumption.

With regard to financial conditions, I think it is useful to consider the situation relative to an assessment of a neutral or an equilibrium federal funds rate. Taking into account the slower growth of structural productivity, a neutral rate is likely between  $4\frac{1}{2}$  and  $4\frac{3}{4}$  percent. The Greenbook-consistent rate is in this range. Until recently, one argument for keeping the target funds rate at  $5\frac{1}{4}$  percent had been to offset otherwise accommodative conditions. As recently as June, we had very low risk premiums and ample liquidity for all types of private borrowing, including large commitments for private equity deals. Now, of course, overall financial conditions have tightened and in some markets have turned very restrictive. Clearly, this restrictiveness is a downside for growth. Whether it is as large as  $\frac{1}{2}$  percentage point, as the Greenbook assumes, is uncertain. In any event, the ongoing repricing of risk also adds a good

deal of uncertainty to the forecast. You all know it is very difficult to forecast the impact of such financial turbulence. Recent history and Dave Stockton remind us of this. In the early 1990s, restrictive credit due to depositories' capital adequacy problems had a significant impact on real economic activity. In contrast, in the fall of 1998, we thought financial conditions would impinge a good deal on the real economy, but 1999 turned out to be a very strong year for growth. Bottom line—and we all recognize this—we need to be careful how we react to the current financial situation.

Turning more specifically to the outlook for growth, our Chicago forecasts have tended to be somewhat more optimistic than the Board staff forecast, and we remain so. That said, the incoming data have been softer than we expected. So we marked down our assessment of residential investment again, but not as much as the Board staff did—again, and the decline in payroll employment caused us to lower our near-term outlook somewhat. As long as the financial difficulties are contained, and that is our working assumption, we expect growth to return to potential by the second half of 2008, and we have a higher potential output growth rate than the Board staff. However, I admit that the risks seem weighted to the downside of this projection.

With regard to inflation, the improvement in core PCE inflation earlier this year appears to have a bit more staying power than we thought it might. If aggregate demand does weaken, as expected, then there is less risk of inflationary pressures arising from constraints on resource utilization. Energy prices, though, are a concern. My contacts do not seem to have much difficulty passing cost increases through to their customers. Overall, however, we have core PCE inflation edging down to 1.8 percent next year and remaining near that rate in 2009. I see

the risk to this inflation forecast, conditioned on the outlook for growth, as being fairly well balanced. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Let's put President Poole between us and the coffee break. President Poole. [Laughter] Sorry.

MR. POOLE. After or before?

CHAIRMAN BERNANKE. Before. Go ahead.

MR. POOLE. Oh, before. Okay. I'm going to be brief.

MR. MISHKIN. It's a question of how desperate you are. [Laughter]

MR. POOLE. Speak for yourself. I have just a few anecdotes here. My contact in the trucking industry says that things are very, very glum there. Volume is down 11 percent, year over year. Shipping rates are down 5 percent, and this is very general in the trucking industry. We get the same story from the trucking side of FedEx and UPS. But the small package side of FedEx and UPS is doing somewhat better. In fact, the August and September numbers—September to date, obviously—are actually a little better than the July numbers. They have not changed their outlook for the holiday season, and so it is not a real buoyant outlook, but they haven't changed it at all in response to the financial market upset. A contact in the fast food industry had an interesting comment that actually came out of Wal-Mart. Wal-Mart is reporting a very significant drop in money transfers to Mexico. That is probably reflecting the number of Mexicans who work in the construction industry. A contact with a major software firm is really completely different. They are seeing very buoyant revenues. They are seeing IT sales running above the Gartner forecast. They track sales, and the weekly sales—this is as of Friday the week before last—were doing very well; in fact, they were accelerating. A comment about the consumer market: A new release of software for an apparently popular game has very strong

pre-orders. Business sector demand is uniformly strong across small, medium, and large businesses. International demand is very strong. There were no bad pockets in this business at all was the report that I received there.

My summary view on the outlook is that, if the financial market upset goes away or settles down in a few weeks, the outlook for next year is going to appear more or less as it did last June before the financial market upset began, with of course some major exceptions or revisions. Housing is, unambiguously, going to be weaker. The nonprime market is gone, I think, for the foreseeable future. Maybe some of the alt-A market would start to come back, but the subprime is gone for the foreseeable future, and housing-related goods—appliances and furniture—presumably are going to reflect the housing weakness. If the market disruption continues, the fallout for the real economy will grow, and it is very hard to know how that might turn out. As you were discussing, things like the surprises going on in the United Kingdom come along in a very unpredictable fashion with unpredictable results. I view the Greenbook forecast as reflecting a mean with a certain probability of a stronger outcome, more like the one we had in June perhaps, and then, of course, a certain probability of a weaker outcome. Our job is to raise the probability of that stronger outcome without raising the probability of higher inflation. Thank you.

CHAIRMAN BERNANKE. Thank you. Sorry to have put you on the spot there. It is 11:10. Why don't we take a break until 11:30? Thank you.

[Coffee break]

CHAIRMAN BERNANKE. President Stern.

MR. STERN. Thank you, Mr. Chairman. Let me make a few comments about current economic conditions and then talk a bit about the outlook. By way of overview, I will say that I

largely agree with the Greenbook, both about the current quarter and about the near-term outlook, in any event. The current quarter does look as though it is going to turn out to be certainly respectable real growth of 2½ percent or perhaps a bit more. The anecdotes from our District that relate to the third quarter seem to be consistent with that. Employment has been sustained, and if anything, the reports of the scarcity of skilled labor have probably increased. In fact, some of our directors have speculated that perhaps the aggregate employment gains have been restrained by that availability issue. The largest bank in our District and several others say that, based on what they are seeing, consumer spending and consumer unsecured borrowing are proceeding normally. Repayments are proceeding normally, and credit quality on the consumer side is in good shape. The one exception to what I would describe as a generally positive picture is what we are hearing in the nonresidential construction sector. I don't want to make too much of this, but I have a sense that it is significant. Some of the large developers in the District have reported that, because of the change in financial conditions that has occurred in the past month or two, some projects are clearly being postponed. Whether they will ultimately be cancelled remains to be seen, but there certainly have been some effects there.

Turning to the outlook, I think that the outlook for real growth over the next several quarters is less favorable than it was formerly. I admit that it's a stretch to get there, if we rely on our familiar models to produce that result. Nevertheless, I take a cue from the comments I made a moment ago about nonresidential construction. It looks as though that will be somewhat slower than I earlier anticipated because of changing financial conditions. I would guess that we would see the same thing in outlays for equipment and software, so I'm expecting a less favorable performance there. As far as the housing sector is concerned, it seems to me that, given the inventory of unsold homes, even if financial conditions improve and improve relatively

quickly, housing is going to exert a depressing effect on the economy for quite some time to come, just because of the inventory overhang. More broadly, the changes in the cost and availability of credit that we see are likely to hamper the economic expansion for several quarters. So I have marked down my forecast accordingly, based on changes in the factors I cited—namely, a somewhat less favorable outlook for nonresidential construction and ultimately for spending on equipment and software, prolonged weakness in the housing sector, and a somewhat less favorable outlook for consumer spending as a consequence of changes in credit cost and credit availability.

On the inflation front, the incoming information is slightly more favorable than I had earlier expected, and so on margin I have adjusted my forecast there as well. I had been expecting a diminution of core inflation as a consequence of the ebbing of transitory factors and of a moderately restrictive monetary policy. It appears to me now that the decrease in underlying inflation is occurring a little sooner than I had anticipated, and I think this is obviously a positive development from a number of perspectives, one of which is that it is potentially significant as it gives us a little more maneuvering room on the policy front if, in fact, it is sustained. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman Geithner.

VICE CHAIRMAN GEITHNER. Thank you, Mr. Chairman. In my view, the balance of risks has changed significantly over the past several weeks. Although outside of housing we don't see much evidence nationally of a significant softening of growth, growth is likely to be somewhat softer than we had expected, and the downside risks to that lower path have increased substantially. I think inflation risks have diminished somewhat, but we have to remain attentive to the familiar sources of continued upward pressure. Financial conditions have tightened since the August meeting, even with the increase in the amount of easing priced into markets, and

despite the moderation in the LIBOR term spread to fed funds over the past few days, conditions in credit and funding markets remain very fragile. Even under relatively optimistic assumptions about how these developments in markets will unfold, the process of adjustment will take some time to work through the financial system, and very protracted impairment to market functioning would raise, of course, the possibility of even more-adverse outcomes on the real side of the economy.

These changes, in my view, justify a reduction in the fed funds rate at this meeting. Monetary policy has an important role to play in reducing the width of the adverse tail of the range of potential outcomes for real activity. By reducing the probability of an extremely bad outcome on the real side, monetary policy can help mitigate some of the coordination problems that are hampering financial market functioning and delaying the necessary repricing of risk that needs to take place, particularly in markets for term funding, the interbank market, and for mortgage-related products. The difficult and consequential judgment we face is about the appropriate size of the monetary policy response to these changes in risks to the outlook. I believe the arguments work in favor of doing more now rather than less. Policy needs to provide a convincing degree of insurance against a more adverse outcome.

Of course, there are risks of erring on the side of doing too much now, and let me just address three of those risks. First, a large move could add to concerns about the downside risks to growth and about financial fragility rather than mitigating those concerns. My view, however, is that doing too little now would risk exacerbating uncertainty about the macroeconomic outlook, and a gradualist, tentative response would be more disconcerting than encouraging. The risk of underdoing it now is that we will ultimately be forced to do more. A second risk is that a large move now could add to uncertainty about future inflation outcomes. This is true.



However, I think various measures of changes to the inflation outlook suggest that risks to inflation have moderated a bit, and the markets are displaying a fair amount of confidence in both our will and our ability to keep future inflation stable at reasonably low levels. Acting in a way that suggests that we believe our credibility is more fragile would be more disconcerting than encouraging to the markets. The third risk is that a large move could reinforce concerns that we are adding to the moral hazard in the financial system. This is, I think, an inevitable, necessary consequence of acting to provide insurance against an extremely negative outcome, but it's not a good argument against doing what we think is justified by the balance of risks to the outlook. In this context, it is important to be careful in the way we talk publicly about moral hazard regarding this balance. In our financial system there is a substantial amount of leverage in institutions and vehicles that are subject to very acute liquidity risk, and part of what you are now seeing in Europe, in the United Kingdom in particular, are the effects on confidence of finding the wrong balance, frankly, between concerns about moral hazard and the appropriate role of the central bank in situations like this. I think the framework that the Chairman laid out in Jackson Hole explains exactly the right balance between what we cannot or should not try to do and what is important to do with monetary policy.

The process of adjustment and deleveraging that is under way in markets, in asset prices and risk premiums, is necessary, and we should not direct policy at interrupting or arresting that process or at insulating investors or institutions from the consequences of the decisions that got us to this point. Our objective should be to help facilitate that process but to do so in a way that reduces the chance that it will cause too much damage to the functioning of the core of the financial system and to confidence, because of the consequence of such a scenario for the real economy. To get through this process, bank balance sheets need to expand substantially, and

we're fortunate that they can expand and are now expanding very substantially. A range of nonbank financial institutions and financing vehicles will have to be unwound and restructured. Asset prices and risk premiums may have to move further as more deleveraging takes place and assets are liquidated. Some of the inevitable increase in macroeconomic uncertainty is priced into expectations. Investors will have to get more comfortable that they can make judgments about how to value mortgage-related and other asset-backed securities, despite the loss of faith in ratings. The process of differentiation among strong and weak institutions, conduits, financing vehicles, et cetera, also has to continue. But as many of you said, this process could take quite some time, and it will leave us with the risk of a fair amount of fragility in markets in the interim.

Let me end just by reminding you of what I'll call the "Bernanke Doctrine of Credibility" that the Chairman laid out at one of our previous meetings. Credibility for a central banker is not just about the confidence that we instill in markets that we will act to keep inflation stable and low. It is also a function of our capacity to demonstrate that we have a sufficient feel for the evolution of the economy and about confidence and that we will meet those inflation objectives without excessive cost to real activity and confidence. Part of that credibility is a feel for what is happening in markets and a capacity to look forward and anticipate the potential implications that those developments may have for the outlook. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. The repricing of risk and rechanneling of credit flows under way I believe will exert restraint on spending, especially in the near term, but over the longer run as well. A critical channel of contagion that came into play in the intermeeting period was the involvement of the banks as providers of credit and liquidity backstops in the ABCP market. As a consequence, uncertainties about real estate markets, the performance of

nonprime mortgages, and structured-credit products came to rest as greater uncertainty about bank exposures. The classic flight to safety under way—the desire to protect capital and liquidity—has caused banks and those providing them credit to become more cautious. This has resulted in greatly reduced funding in term markets spreading the constriction of credit potentially well beyond the mortgage and leveraged-loan markets we talked about in early August.

Like so many around the table, I feel that I can honestly say that the uncertainties around the output forecast were indeed larger than usual this time. Fortunately, we don't have many degrees of freedom to test hypotheses about the sorts of relationships that we're talking about here. I think we can expect effects on spending to be greatest in the short and intermediate terms, while markets are disrupted and while participants are struggling to find new ways of intermediating credit that address the perceived shortcomings of the previous practices. In the short run, to preserve capital and liquidity while secondary markets are impaired, banks have tightened terms and standards for loans. You can see this directly in the rise in spreads in the prime jumbo market, but it must be true for other less easily observed credits as well. Some credits, such as nonprime mortgages and leveraged loans, just haven't been available for a while.

An already weak housing market has been most directly affected, and construction sales and prices will probably fall substantially further because of the reduced demand along with a large overhang of unsold homes. Consumption spending is also likely to be trimmed. Tighter terms for home equity lines of credit and second mortgages mean not only that housing wealth is declining but also that it is probably less liquid and more expensive. To the extent that asset-backed security markets are affected and lenders have questions about consumer balance sheets, the cost of consumer credit could well rise also. Household confidence has apparently been

affected by the adverse financial market news. Investment spending may also be held down by uncertainty, by a sense that consumer demand will be growing less rapidly. I have been struck in listening to presidents around the table report about their Districts that the tone has shifted noticeably toward less optimism, slower growth, and more caution on the part of our business respondents. It has been one of those shifts that you hear every couple of years around the table that are different from what might have been anticipated, say, from reading the Beige Book. There is also some tightening of credit conditions in the business sector—for example, for commercial real estate credit, as some have noted, and for credit for below-investment-grade firms.

As a consequence, some downshift in GDP is highly likely over the next few quarters, and without policy action, we would most likely end up with a substantially lower GDP a few quarters out. Indeed, in the Greenbook, the output gap is noticeably wider at the end of '08 despite near-term policy easing of 50 basis points. I also noted downside risk to my output forecast. It seems to me that, in this period when markets are adjusting, those risks are most skewed. The potential for adverse interactions seems large, as nervous creditors assess the implications of declines in house prices, volatile earnings of commercial and investment banks, and setbacks in overall confidence. I think there is a non-negligible risk that the constrictions in credit availability would feed back on the economy and, in turn, feed back on credit supply. As market participants are better able to distinguish and assess risk, liquidity will be re-established in many markets. Although we have seen some improvement in the past week or two, markets are still quite dysfunctional in many regards. Like others, I think it could take a while to discover how to structure securitizations that have the requisite transparency and appropriate principal-agent incentives to restore investor confidence and to recalibrate the roles of securities

markets and banks. The process could be particularly drawn out in mortgage and related markets, which are likely to be affected for some time by uncertainties about the prices of houses and about the performance of mortgages. Moreover, some effects of the recent turmoil will be longer lasting. Risk spreads in a great variety of markets are likely to be at higher, more-realistic, and more-sustainable levels; banks should be charging more for credit liquidity backstops; less leverage in the financial sector implies a need for return on the greater amount of capital involved in intermediation, including at banks; and some credit conditions at any given fed funds rate will be tighter one year from now than they were a few months ago.

I have concentrated on problems for growth, but the upside inflation risks have not disappeared. Unit labor costs have been rising. Markups, while still high, have come in, affording a reduced cushion for absorbing labor costs. Resource utilization remains high by historical standards. Import prices may prove problematic. Although commodity prices may level out as in the staff forecast, foreign economies also are producing at high levels. Pressures on the costs of finished goods could increase, especially if the dollar declines further. My expectations for the most likely path for inflation have been revised just a tick lower, given the favorable incoming data and the lower path for economic activity relative to potential, which will increase competitive pressures in labor and product markets. For now, given this outlook, we need to concentrate on the potential effects of the disruptions to financial markets on the real economy when we consider policy in the next portion of this meeting. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. As Governor Kohn just suggested, I think financial market tumult is likely to be of sufficient duration to have a meaningful effect on the

real economy. The policies that we'll be considering later today are unlikely to be a panacea, but I think that is not a reason for us to avoid taking some smart and preemptive actions. The recuperation of these financial market trends is positive, but I wouldn't measure the recovery period here in weeks or even the next couple of months. I suspect it is going to take longer.

The moderate growth story that many of us have been telling and that is reflected in the Greenbook and has been for some time appears at best case to be even more moderate. The downside risks and the possibility of some nonlinear events in these financial markets are higher, perhaps not as high as they might have seemed when we last met by videoconference, but those prospects are still very real. When we had the videoconference on August 16, there appeared to be at that moment extremely poor market functioning, necessitating our actions that day. I think we rightly determined that there was a liquidity shock, maybe even a liquidity crisis, that was affecting financial intermediaries and that our actions were necessary to stop the liquidity symptoms from manifesting themselves as a credit crisis. To that end, our work goes on today. The results from that action and the benefit of time seem to have stopped the bleeding, and the deterioration of financial market conditions has largely ceased. However, although the improvements at this point are quite encouraging, I don't think they are yet convincing. Let me just spend a few moments on the distinct phases of what this financial market distress has looked like and try to outline, maybe even oversimplify, where we are in that.

Phase 1 strikes me as liquidity replenishment by financial institutions and marketmakers alike. During the past three to four weeks, commercial banks, investment banks, asset managers, and other private pools of capital have had to reassess their liquidity needs, their cash needs, in light of the tougher financial market conditions. Today, by and large, they have more cash on hand than they ever thought would be necessary or prudent. But that liquidity replenishment, at

least for the median and stronger firms, is somewhat complete as they evaluate what the risks are of contingent liabilities coming on their balance sheets and as they reevaluate the stress tests and the comments of the people and the risk managers who had been telling them that they were ripe for financial distress. Some degree of confidence has been broken over the past six weeks. I wouldn't say it has been reestablished, but I think that is probably one of the things in the post Sarbanes-Oxley era that are giving the decisionmakers at these financial institutions a little less interest in diving back into these markets—they learned that maybe what they had at their disposal or what they thought they knew wasn't as certain as they had hoped. Many of these financial institutions during the past several weeks still thought that another leg down was possible—that strong financial institutions were continuing to ensure, and would continue to ensure even today, against four-sigma events—and that the best way for them to lose their jobs in this environment was to be short of liquidity. They are also very focused on what is happening among their peers. They are very focused on their relative strength, and they certainly want to be the survivors if the situation gets dramatically worse. All of these are in some ways ex post rationalizations for why many of these institutions didn't serve in the shock-absorber role that we would have expected them to take quickly after market distresses had begun. I think they are getting used to the new environment. They have long since forgotten the robust times and the robust profits of the past five years, and they are looking at their capital ratios and getting some comfort from what their people are telling them. But when we look at these financial institutions, we are probably more prudent to judge them by their actions rather than what these capital ratios would suggest. Their actions are still not ebullient. Their actions are still not overly opportunistic.

I said before that liquidity is confidence. Well, in times like this, I might be wrong. Liquidity is oxygen. They can't live without it, and no price can compensate them during this liquidity replenishment period for a lack of oxygen. I think O<sub>2</sub> levels might now finally be returning, so that they can enter phase 2 of this process, when they are able and willing to part with their cash. Phase 2, thus, is about finding new market-clearing valuations, being able to discriminate among differentiated assets, and being able to put opportunistic capital to work. Admittedly, I'd say this valuation phase is less advanced than the liquidity phase, but the process of price discovery is slowly but surely working its way through these asset classes. High-yield bonds are one example. Chrysler priced high-yield bonds at 95. A couple of days later they were trading at 99. Other sorts of leveraged loans and high-yield financing have indicative prices in the mid-90s, but there are very big pipelines, as we have discussed before, that could take a while to clear. My best guess is that we won't see those markets clearing until after the commercial banks announce their third-quarter results. So in mid-October, we might see a new estimate of that, but I will admit it's very hard to say. The price-discovery process around subprime mortgages is less advanced, but even there we are seeing trading desks asking the executives on the top floor for balance sheet capital because they see great prices for which they just need the balance sheet. That those discussions have begun and are somewhat more advanced than when we last talked is an encouraging sign, but the process of adjustment to the new market realities will take time. Bill Dudley spoke in great detail about other important developments—discrimination among asset-backed commercial paper programs being made depending on sponsor and collateral, financial institutions and the counterparty risk they represent being differentiated, and commercial banks more so today than even some weeks ago



willing to invest in jumbo prime mortgages in the expectation that the securitization markets will reopen.

It strikes me that we are substantially advanced in the liquidity phase and only somewhat advanced in valuation. That would take us to the third phase. The third phase is about the cost of capital. We'll talk about it more in the next round, and optimally I would say that the liquidity replenishment and valuation necessary would be far more advanced before monetary policy actions would have to be put into place. But I think we bought ourselves some time, and this strikes me as the right moment for us to take monetary policy actions. The good news is that we have seen some tentative progress in those first two phases, and we'll talk more about our actions to come.

Let me just highlight a few more issues. What are the key challenges? What are the things to which we might want to look to see if the situation continues to improve modestly or reverses itself? I would look at a few things. First, as you look at some of these SIV structures and conduits, particularly outside the mortgage assets, to this point they are largely suffering from a liquidity crisis rather than a credit crisis. That could change if the real economy falters, and that is an additional reason for us to take monetary action today. Second, many still believe that it's not safe to come out and play, and they are continuing to hunker down. I would have thought, right when this started brewing in the middle of August, that by now folks would have been more comfortable, but the median person is still more scared than I would have expected. Third, leverage is harder to come by. Even on investments for which the credit work seems pretty easy, like high yield, it is hard to get leverage alongside these equity placements, making folks less interested to jump back in a big way because the returns aren't there. Another indicator I'd look to is the medium-term note market, which we haven't discussed a great deal

but is really a sibling of some of these other commercial paper markets. They don't appear to be too distressed at this time, but as mentioned earlier, I would also look at the mortgage-backed securities around commercial real estate. The lack of term funding, which we'll discuss when we discuss the auction term facility, has put financial market improvements at some risk. Even though we have been seeing real improvements in recent trading days, the prospect that these institutions are rolling over their funding and looking for funding every day strikes me as significantly increasing the tail risk and suggests that we need to take action.

Finally, on the real economy, having spoken to a range of credit card companies yesterday to try to get their sense of three things, I can give I think generally positive reports. First, as a measure of retail sales, the view of institutions that cater to the high end, the middle end, and the low end is that retail sales in August and through the first two weeks of September were fine, not great. But when I asked them the question "If you weren't aware of what was happening in the financial markets and you were just to review these data, does it look as though something happened? Does it look as though there was some exogenous shock?" to a person the answer was, "No, it looks as though things are coming along okay." I think that's reasonably encouraging. Second, I asked them about the credit quality of consumer behavior, whether delinquencies for individual credit card behavior at the low, medium, or high end had changed, and the answer was that they really hadn't changed much. They can look and find yellow or red flags, but they said generally that consumer credit quality also looks fine. I'd say the biggest caution from three or four of these credit card companies came on the corporate side.

Corporations wanting to be more protective, being more risk averse during this period, seemed to have cut back on allowable expenses for things like airlines, hotels, conferences, and the like, so their corporate credit volume had slowed up somewhat—but, again, nothing overly dramatic.

Last, I would just share the uncertainty and hesitation that has probably crept its way back into boardrooms generally as many of these companies outside the financial sector are trying to figure out what the crystal ball looks like for the real economy. That hesitation is not useful, and as I said at the outset, I think the best case is that we give up a couple of tenths of GDP. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thank you very much. Obviously, I agree with virtually everyone around the table that some of the downside risks have increased, and it's important to think about them in terms not just of the overall average but of tail risks. As Vice Chairman Geithner pointed out, one of the responsibilities we have overall is for thinking about macroeconomic and financial stability, and so we have to take into account those tail risks. Even if they may not change the mean or the median forecast that much, it is important that we think about those downside scenarios. Obviously, the chance of those has increased. Now, whether that is likely is something we will continue to discuss. Some of those channels through which this could be happening are from the real sector in housing, concerns about information in subprime markets leading to broader problems in the markets. I'd like to characterize the markets as being brittle. That is, they are in a state such that a little pressure here or a little pressure there has the potential to cause some cracks. Many markets are functioning, but some are not functioning very well, and there is always the potential for something else to come along the line, even just a small amount of pressure. We saw that what really initiated things right after our FOMC meeting was BNP Paribas's announcement. That gets back to something that Karen Johnson said earlier in one of these things. It was hard to know that it was coming, and it would have been hard to know that it would have the kind of effect that it seemed to have of leading to a revaluation of

risks not just in the subprime sector but much more broadly. So I think we have to be very mindful of the brittleness of these markets.

I do think that the numbers that have come in, looking in the rearview mirror, are pretty strong. Looking forward, there is more uncertainty, as Dave and others have mentioned. We obviously have the housing market problems, and we have the challenges in the labor markets. To throw something in from an anecdotal survey, although it's a fairly systematic survey—at Duke they surveyed 600 CFOs of major corporations, and they asked a series of extra questions. The survey was done in August, and so it was filled out by the end of August. We don't know exactly when they filled these out, but they had to be in by the end of August. Asked about the financial market turmoil, three-quarters of the CFOs said that it had no direct effect on them, but only 40 percent said that they were taking no action because of the financial market turmoil. A third of them said that they were going to be reducing capital spending, and 15 percent said that they were going to be reducing hiring. This is not just of the one-quarter who said that there would be direct impact but of everyone, three-quarters of whom said that there would be no direct impact. But they said that they were reducing capital spending plans and hiring plans. So this uncertainty could have real effects from these channels that we haven't yet seen. Also, for what it's worth, though I guess it's more relevant for the next round, one of the questions was, "Would you be helped by a 50 basis point cut in the federal funds rate?" A resounding 45 percent said no. Less than one-third said that it would be more than a moderate help to them, but that's something we'll get to in a bit.

One thing that I want to do—it has been important in my thinking and was also raised by a few people—is look at the parallels and differences with 1998 because that is the closest episode that I can think of in which many of the same liquidity issues came up: a dramatic

widening of the on-the-run, off-the-run Treasury spread, actually, much larger in 1998 than we have seen recently; a plunge in short-term yields; and a very strong desire for short-term Treasury paper—exactly as we have seen in both cases, although greater volatility in that short-term market today than in 1998 and higher volatility with respect to the equity markets today than in 1998. Spreads also moved up—term spreads, swap spreads, and CP spreads went up quite dramatically, although in certain types of CP spreads a little bit less back then than today. An interesting thing I noted in going back and looking at the old memos, which were created I think by some of the people who are in the room now, was that one thing that brought the CP market back in 1998-99 was not an innovation but the dramatically greater use of something that had only just started to be used—asset-backed commercial paper—providing collateral that helped people to feel confident that they could buy this commercial paper and something would be there. So it is sort of ironic to see that the challenge today was the innovation that, to some extent, saved the CP market back then. We are seeing the same kind of swelling of bank balance sheets today that we were back then—an enormous amount of liquidity coming into the banking system. In terms of the macro shocks, there are some parallels and differences. We came into the summer of '98 with an economy that was growing reasonably strongly, exactly the time of those productivity shocks that weren't fully understood. Some people had the intuition that those productivity shocks were going to be strong, but they were stronger than the Greenbook and, I think, any of the private-sector economists had anticipated. There was also an important international shock, which we don't have now, and there was also a very strong policy response, which helped provide liquidity in the emerging markets. Interestingly, there was a policy cut of 75 basis points in a fairly short period of time. We will get to that in the second round.

But something that I think is different is that the source of the uncertainty, at least so far as market participants were concerned, was really focused very much on (1) the international markets and (2) LTCM. The interventions in the international markets through the IMF, the World Bank, and others were helping to respond to some of those. There was the working out in September, actually before any of the FOMC rate cuts occurred, to try to settle the LTCM issue. But being able to focus on the source of the uncertainty as the market participants perceived it back then was very important. I think we have a much greater challenge today because the source of uncertainty is really a change in the whole model of how these markets are operating. In the old days, we used to know where the risks were; unfortunately, we knew that they were all on the bank balance sheets. With the originate-to-distribute model and securitization, we have been able to move to a different model in which the risks are much more dispersed. Not all of them are on the bank balance sheets, although some of them are certainly going to be coming onto the bank balance sheets, so the banks never fully get out of this. But it leads to potential pockets of uncertainty, and that is exactly what has come up. People don't have as much information as they thought they had. They were relying on traditional rating agencies and on other sources that were perfectly fine for traditional credits but more of a challenge for the newer credits. So I have sometimes said to market participants who talk about this, "Well, you know, you were too trusting of those ratings, and I think now you've learned that Ronald Reagan was right. 'Trust, but verify'." Thus there's a lot more that is being spent on trying to verify what the value of credits is in these markets. You can see that as being somewhat inefficient because now everybody has to do that individually rather than just rely on a centralized credit-rating agency, but obviously there are questions about the effectiveness of that credit-rating agency. That is one reason that I see a slow recovery in some of these markets—market participants

realize that they didn't have the information they thought they had. They are now going to have to invest much more in getting that information. I think one thing that has been important in the actions we have undertaken is to provide liquidity and support so that people should feel it is worthwhile to make the investment, to do the due diligence, and to try to understand that they need to verify the ratings or other things that are out there.

The banking system, as has been mentioned, is in a good state, but I don't want to overstate that because there are challenges in bringing things onto the bank balance sheets. As was mentioned, a lot of capital is above the regulatory minimums, but there is a reason that banks hold capital above their regulatory minimums: They are concerned about ratings. Regardless of what people may say about rating agencies these days, they are still sensitive to that. Banks are worried about making sure that they are perceived as having sufficient capital and sufficient liquidity. So one shouldn't just say, "Well, you can use up all that capital." With the Division of Banking Supervision and Regulation, we have tried to add up the maximum amount of SIV conduits; the ABCP that could come onto the books, which is potentially in the hundreds of billions of dollars; and the amount of leveraged-loan commitments, which is about \$280 billion to \$300 billion just for the four or five major banks alone. That still doesn't bring you to say capital falls below "well capitalized," but that is not where their banks want to be. So I do think that the banks would react if these things started coming onto their books. In addition, we did some investigations with the OCC through the Shared National Credit Program. We pulled records on about 900 credits at the major institutions to try to see what the underwriting standards were. We found—or I should say that the examiners found—that about 23 percent of those were considered to have weak underwriting standards. Now, that doesn't necessarily mean that there are going to be problems or losses, but it was much higher than had been expected.

About 28 percent of those were on U.S. banks and 26 percent on foreign banking organizations, but almost half of them were on nonbank organizations. I don't want to overemphasize the challenges to the banks, but there still may be these pockets of weaknesses out there that we are not sure about.

What that brings me to, in thinking of where we are, is that we have gotten into a very good situation from a risk-management point of view. By holding the line and being very credible on inflation, we have seen core numbers decline over the past three to six months and in a fairly consistent way, exactly as Jeff Lacker said. Even as the markets have dramatically reevaluated where they think policy is going to go in the short and intermediate terms, we have seen very little change in market expectations of inflation. That gives us a lot more potential to be able to move forward. Also, from a risk-management and insurance perspective, what if the economy does take off? What if it is 1998-99? I have some numbers that the staff provided to me. In the November 1998 FOMC meeting, which was the last time they raised interest rates, real GDP was forecasted at 3.3 percent for '98, and it turned out to be 4.5. They were predicting 1.6 percent growth for '99; it actually turned out to be 4.7. But the key from my perspective is what happened to inflation, because one way of thinking about it is, What is the steepness of the Phillips curve? There may be other explanations for this. The Greenbook forecast for the November FOMC meeting was 2.4 percent for core CPI inflation in '98, and the Greenbook was spot on. That's what it was in '98. The Greenbook was forecasting 2.2 for '99. It turned out to be 2 percent. It was actually lower than it had been and than was forecasted. So even with a 75 basis point increase, even with very little effect on the macroeconomy, it turned out that there was not much of a tradeoff, not much of a loss in buying that insurance. That heartens me as we go into the next round to think about the policy choices. Thank you.



CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. Thank you, Mr. Chairman. Clearly, the key issue in thinking about where the economy is and what we need to do about policy is the financial destruction that is going on right now. When I look at it, I think about the different episodes that we've had in the post-World War II period and separate them into two sets of episodes. There's the episode of 1970 with the Penn Central crisis, there's the 1987 stock market crash, there's the 1998 LTCM episode, and then, of course, the World Trade Center terrorist tragedy in 2001. That's one group. In those contexts, there was a lender-of-last-resort operation. It was active policy on our part, and it did resolve the situation in the financial markets very quickly. The other episode is the early 1990s, when there was much more of a severe structural problem in which the banks got into trouble. Therefore, it took quite a long time for them to fix their balance sheets in order to get players back into the financial markets to make loans to people who had good investment opportunities.

When I look at the current episode, I see something in-between. I do not think that in this case the situation can be resolved quickly because I think that the price discovery issues are severe. In particular, we've gone to an originate-to-distribute model, which Governor Kroszner mentioned, and we have found some serious flaws in it. The expectation is that we will have new models coming out. In fact, I think that this is actually going to be a long-run profit opportunity for the banks. So if we were allowed to buy bank stocks, I think it would be a good idea. [Laughter] But the key problem is that this is going to take a substantial amount of time, even if things go very well; in that context, there is a substantial negative shock to aggregate demand and, therefore, a substantially weaker economy. However, the issue that most concerns me here is that, even though I think the modal forecast is that growth will be slower than we

expected, the downside risk is actually very, very substantial. Though we may not be allowed to mention it in public, we have to mention the “R” word because there is now a significant probability of recession. The problem here is really the interaction of the financial side with the real side. I’m worried that, as the economy becomes more nonlinear, we have the potential for a vicious circle or a downward spiral, whatever phrase you want to use—that, in particular, we have a financial disruption, which means that it’s harder to allocate capital to people with productive investment opportunities and, as a result, you get a contraction in economic activity. A contraction in economic activity makes information revelation or price discovery harder to do. That can then lead to more financial disruption, which leads to a downward spiral in terms of economic activity. So the big issue here for me is that this nonlinear element is very real right now. The question is what to do about it, and that’s what we will be discussing shortly.

However, I think it is also important to recognize that inflation risks are just not that severe right now. That’s the good news because it will allow us flexibility to deal with the situation. In particular, we see inflation expectations that are very grounded, something that everybody has mentioned. Also, even in the modal forecast and not worrying about the downside risks, the expected future output gaps are more negative, so we have less pressure going forward there. I was happy that the staff slightly lowered the NAIRU estimate, which was consistent with my views in the past couple of cycles, when I thought that it might be a smidgeon under 5 percent. I think their revision makes sense, and, again, it means that there’s a bit less likelihood of upside risk to inflation. Then, also, there are the downside risks to real growth. When I look at the inflation situation, I do think that inflation expectations are grounded around 2 percent right now. By the way, that’s not necessarily written in stone because things that we might do could actually change inflation expectations; but I think that we have to take inflation

expectations as given right now. However, I see that the risks are slightly to the downside from that 2 percent level because of the things that I've just mentioned. The key point here is that we have a situation of potential nonlinearities, big tail risk, that could actually get very nasty, and in fact there is a potential for recession. On the other hand, I don't see that inflation risk is the big problem right now. Thank you.

CHAIRMAN BERNANKE. Thank you, and thank you all. Let me just briefly summarize and make a few additional comments. Financial market conditions were a key theme of our discussion today. Recent developments in financial markets have been reflected in reduced willingness to take risk and in tighter credit conditions. Bank balance sheets are a potential constraint on credit extension. Participants were unsure about how long these conditions would persist, but the repricing of risk seems likely to be persistent. The tighter credit conditions will very likely weaken an already very weak housing market, as nonprime borrowers are rationed out and jumbo mortgage borrowers pay higher premiums. Mortgage rate resets and foreclosures pose further risks. Industries related to housing are naturally showing weakness. However, creditworthy borrowers are able to obtain credit. Second-quarter and third-quarter GDP figures may be solid, but even so there have been some signs of slowing in the economy, even before the financial market developments, notably in the labor markets and in housing. Auto output is also on the weak side. Labor markets do remain tight, and in general Main Street has been far less affected thus far than Wall Street. Consumer spending continues to grow along with incomes, and net exports remain strong. Financing should continue to be available for capital investment. There were some regional differences in soundings on business confidence and expectations, but in any case, uncertainty has increased. Some of the key questions include whether the further weakness of housing will spread to consumer spending; whether credit

tightness will affect sectors other than housing, including the household sector and commercial real estate; and whether the labor market will continue to slow. There is a general view that downside risks to output have increased with some very bad scenarios at least conceivable. However, others noted the resilience of the U.S. economy and the fact that previous financial crises had not necessarily reduced growth. Inflation has moderated somewhat, and more participants view the risk to inflation as closer to balance. Inflation expectations remain stable, and cyclical slowing is likely to reduce the pressure on resources. However, tight labor markets, strong foreign demand, high oil prices, and other pressures still do exist.

Are there any questions or comments? Let me just make, as I said, a few extra comments here. More so than usual, we have to look forward rather than backward. We have to try to assess how these recent developments change the outlook, and that is very difficult. To me, the critical elements to look at are housing and labor markets. I think the interaction of those two sectors will determine the dynamics of the economy. There has been some discussion about the fact that in 1998 there was very little effect of the financial markets on the real economy. There was no obvious channel of effect in that episode. In this case, there is, I think, a pretty clear channel of effect through mortgage lending, and we have already seen changes in availability of mortgages and changes in cancellations, sales expectations, and the like. I would note that there are also—as you can see in the consumer confidence numbers, for example—expectations on the buyer side. If buyers think that the housing market is going to be very weak, they will be less likely to want to get into it. Finally, credit availability to homebuilders may also be an issue. So I think there is pretty much a consensus that the housing sector will take another leg down based on financial market conditions. I mention parenthetically that I have some concerns also about a

few other areas, notably commercial real estate, and perhaps others like consumer credit and autos as well; but, again, I think the focus should be on housing.

On the labor side, I think we can parse the job report numbers in some detail. For example, on the one hand, the August report was not quite as weak as the markets thought it was. On the other hand, it revised down some previous numbers. So overall there seems to be a sense that labor markets were slowing a bit before the financial crisis. Even so, we have been expecting weakening in labor markets for some time, and I think now that the odds of that are really quite high. I do expect to see continued expansion in construction layoffs. There are losses of jobs, obviously, in mortgage finance and other related areas. So I don't know how quickly the labor market will weaken, but I do believe that it will weaken over the next couple of quarters.

Now, those are two predictions. Then the question is, What is the interaction between those two things? I think there is potential for a negative feedback cycle, which is of some concern. If labor markets weaken, particularly if they weaken severely in certain local areas, it will hurt house prices through two mechanisms. First, house prices capitalize employment and other economic opportunities in an area, so house prices will fall as economic activity slows. Second, the demand for housing or the ability to make house payments directly depends on labor income. Working in the other direction, as house prices fall, the normal wealth effects, but also possible precautionary saving effects or other liquidity effects, could begin to affect consumer confidence and consumer spending, and we get the makings of a potential recessionary dynamic that may be difficult to head off. That is the scenario that concerns me. I don't know if it's the modal scenario, but I think it's one we need to watch very carefully.

Beyond that scenario, there are further tail risks. As a number of people have mentioned, most recently Governor Mishkin, these financial effects—financial accelerator effects, if you will—can be quite nonlinear. The Greenbook has a 2 percent decline in house prices in each of the next two years. It's very possible that the decline could be greater than that. Even if it's not greater than that, it will not be uniformly distributed around the country. In some parts of the country, house price declines will be much more significant. The nonlinearity I'm talking about has to do with the distribution of equity among families. If you have a 10 percent decline in house prices and two families, each of which has 50 percent equity in their home, then each family is going to experience basically the normal wealth effect. But if one family has 100 percent equity and the other has 5 to 10 percent equity, the effects on behavior will not be linear. There will be a bigger effect on the family that finds itself in financial stress, and the possibility exists that weakening in these markets could feed back into some of the financial problems we are seeing. So I am concerned about getting ahead of what could be an adverse dynamic between the job market and the housing market.

On inflation, I think the slowing that we are likely to see will probably remove some of the upside risk that we have been concerned about. I don't know how these housing developments will affect owners' equivalent rent. We saw some perverse effects last time. They are still possible. A very small piece of information is that the PPI numbers yesterday actually had some favorable news in them in terms of both intermediate goods and medical costs. So the near term still looks to be fairly good. But I don't dismiss inflation risks by any means, and we know that policy changes can work through expectations as well as through resource pressure, and so I consider that to be a serious concern. Nevertheless, I do at this point think the principal risks are to the downside, and the interaction between different components of the economy

presents the biggest challenge in that respect. I will stop there. Brian, if you are ready to introduce the policy alternatives now.

MR. MADIGAN.<sup>3</sup> Thank you, Mr. Chairman. To guard against the contingency that our security procedures have broken down and the Committee's policy drafts are being monitored by unknown forces, the staff has taken countermeasures by circulating multiple drafts of table 1. [Laughter] Of the two drafts circulated this morning, I will be referring to the draft labeled, perhaps too obviously, September 18, 2007. To summarize, alternatives A and B would both reduce the target federal funds rate 50 basis points today to 4¾ percent but would differ in their risk assessment. Alternative A would conclude that, even after the 50 basis point easing, the downside risks to growth would outweigh the upside risks to inflation, whereas alternative B elides an assessment of the balance of risks but cites heightened uncertainty about the outlook. Alternative C reduces rates 25 basis points and describes the risks as tilted to the downside. Alternative D leaves the stance of policy unchanged but would characterize the risks to growth and inflation as now balanced. Based on your remarks this morning and the proposals by nearly all the Reserve Banks to reduce the primary credit rate, it seems likely that most or all of you favor some easing in the stance of policy today. Thus, the questions this morning would seem to be how much to reduce rates as well as the rationale for that action and the type of forward-looking language to provide.

The modal outlook in the staff's Greenbook forecast would seem to argue clearly for policy easing before long. The staff has interpreted recent financial developments as likely to inflict an appreciable and fairly immediate adverse shock on aggregate demand. As Dave noted, real GDP growth is projected to slow to 1 percent in the fourth quarter and to remain nearly that sluggish in the first quarter. The economy skirts recession, but real activity expands only 1¾ percent next year, less than potential, so modest slack emerges, and the unemployment rate rises to nearly 5 percent, a bit above the staff's downward-revised estimate of the NAIRU. This slack contributes to an edging down of core inflation to just under 2 percent, and declines in energy prices help push total PCE inflation down to 1¾ percent next year. Beyond next year, real growth gradually strengthens to around its potential rate. As I noted earlier today, the central tendencies of your out-year projections suggest that most of you would find a PCE inflation rate leveling out in the vicinity of 1¾ percent, in conjunction with economic growth returning to a potential rate of around 2½ percent—a rate a bit higher than estimated by the staff—to be an appealing outcome.

Of course, while you may be satisfied with such an outcome, the key question is what monetary policy path would be most likely to produce it. In the staff's baseline assessment, a 50 basis point easing in the federal funds rate over the next few months sufficiently cushions the blow of the current financial shock to keep the expansion going in coming quarters while still allowing inflation to settle down to rates that

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<sup>3</sup> Materials used by Mr. Madigan are appended to this transcript (appendix 3).

most of you evidently would find consistent with price stability. If your own modal outlook is similar to the staff's baseline assessment, you might find the selection of any of alternatives A, B, or C at this meeting to be appropriate. An immediate 50 basis point reduction, as in alternatives A and B, would accelerate the drop in the actual federal funds rate by just a month or two relative to the Greenbook. A 25 basis point easing today coupled with an assessment that the risks are tilted to the downside, as in alternative C, and an expectation on your part that another easing would likely be forthcoming would also be essentially consistent with the staff outlook. Thus, your choices among those three approaches might depend importantly on risk-management considerations.

Several of the Greenbook alternative simulations explore the possibility that policy might need to be eased more aggressively. In the "greater housing correction" scenario, the subprime mortgage market is assumed to remain closed over the entire projection period rather than to recover partially as in the baseline, and housing prices decline 20 percent over the next two years, rather than just a few percent. In such circumstances, aggregate demand weakens considerably below baseline, and the Taylor rule suggests that the funds rate should gradually be eased to 4¼ percent by 2009. The "greater housing correction with larger wealth effect" scenario, in which the effects of the greater housing contraction are augmented by a larger sensitivity of household spending to household wealth, points to an even greater easing. Another possibility is that forced acquisition by banks of large volumes of ABCP, leveraged loans, and other assets erodes their capital ratios, bringing them closer to regulatory thresholds and benchmarks negotiated with rating agencies, and that banks respond by tightening credit terms and standards. Partly because episodes featuring sharp changes in credit availability are relatively rare, assessing these effects is fraught with uncertainty. But the "bank capital crunch" scenario in the Greenbook, which was based loosely on the early 1990s headwinds episode, suggests that policy might need to be eased significantly and quickly, with the funds rate dipping to 3¼ percent by June.

If Committee members are inclined to put appreciable weight on the possibility that something resembling any of these three scenarios could transpire, they might be inclined toward alternative A—an immediate reduction in the funds rate of 50 basis points at this meeting coupled with an assessment that the risks remain tilted to the downside. The effects of a preemptive easing of policy—working through the standard transmission channels of lower long-term yields, a lower exchange value of the dollar, and higher equity prices and household wealth—might help cushion the economy from a sharp weakening of aggregate demand. In current circumstances, a relatively aggressive easing of policy and the sense that more could be coming if needed might be particularly helpful in thawing financial markets or at least in preventing a harder freeze and thus might work importantly through credit channels as well as directly through open market prices. A relatively large and immediate reduction in the federal funds rate might go some considerable distance toward alleviating concerns on the part of market participants regarding further erosion in the value of assets held as collateral. It might also be seen by investors as a signal that



the Federal Reserve will act forcefully to sustain economic growth, helping to limit lenders' concerns about losses. By reducing the fears of market participants and bankers about counterparty credit exposures and credit risks more generally—or at least helping to prevent them from worsening—a prompt and sharp easing of policy might help avert a significant tightening in credit terms and standards and thus sustain growth in aggregate demand. In this way, monetary policy might be directed proximately at improving the functioning of financial markets but ultimately at the Committee's longer-run objectives. This argument is easy both to misconstrue and to exaggerate—easy to misconstrue because it may appear that policy is responding directly to asset prices and easy to exaggerate because policy easing cannot do much to dispel the fundamental economic losses already in train, for example, on subprime mortgage investments. But it may be able to help prevent them from contributing to a cumulative weakening of activity that would increase credit risks more generally and feed back adversely onto growth.

On the other hand, the Committee may not be persuaded that the hit to aggregate demand will be as severe as projected by the staff in its baseline forecast, let alone in the weaker alternative simulations in the Greenbook. Members may feel that at least some of the history of financial crises over the past two decades suggests that financial markets can bounce back fairly quickly once the immediate crisis has passed and that the real economy can be surprisingly resilient in the face of temporary financial disruptions. Both 1987 and 1998 come to mind, as was pointed out previously, as episodes in which, at least arguably, the restraining effects of financial events on the domestic economy were not nearly as severe as policymakers feared. A separate point is that many of you see potential GDP growth as a bit more robust than the staff, suggesting that you may also see equilibrium real short-term interest rates as a bit higher. Coming back to the near-term outlook for aggregate demand, even if you think that the staff may be right about the likely degree of forthcoming financial restraint, you may be quite uncertain on that score. Any of these arguments may motivate you to consider the approach of alternative C. Under that alternative, you would ease 25 basis points today and issue a statement that characterizes the downside risks to growth as outweighing the upside risks to inflation. Such an assessment would position you well to respond to incoming signs of economic weakness, should they appear, by easing policy at some point over the next meeting or two. This approach might also be seen as advantageous if you are particularly concerned that the Committee would find it difficult to quickly reverse easing moves that subsequently proved to be unnecessary. You might also prefer a 25 basis point rate cut for now if you are concerned that investors could misread a 50 basis point easing as a sign that the Committee was responding directly to asset prices, potentially exacerbating moral hazard by encouraging excessive risk-taking.

Alternative B may be seen as the middle ground between alternatives A and C. Alternative B would adopt the more aggressive 50 basis point policy easing of alternative A but would not make an explicit assessment of the balance of risks and thus would provide no direct indication that the Committee was considering a further easing move. As noted in the Bluebook, adoption of alternative B would be

consistent with the 50 basis point downward revision to the Greenbook-consistent measure of  $r^*$ . Policy easing of roughly that magnitude over the next several quarters would also be consistent with the optimal policy calculations under a 2 percent inflation rule as well as with a number of the policy rules presented in the Bluebook. Even if you are not sure that the adverse effects on aggregate demand of ongoing financial developments will be as severe as built into the Greenbook baseline, you may be concerned enough to judge that a 50 basis point easing of policy today would provide a measure of insurance that could prove valuable if, as seems likely at a minimum, further financial aftershocks become evident. As I noted, the risk assessment proposed for alternative B is relatively open-ended. The current version suggests being explicit that uncertainty about the economic outlook has increased; for that reason, it does not provide an explicit risk assessment. You may believe, given considerable uncertainty about the implications of financial developments to date and their likely course going forward, that characterizing the balance of risks would be quite difficult and may lack credibility. For the same reasons, you may find appealing the noncommittal approach of this alternative regarding future rate actions.

As Bill Dudley noted, market expectations for the path of monetary policy have fallen sharply over the intermeeting period. At the moment, market participants seem to put substantial odds on both a 25 basis point and a 50 basis point easing today—although, given the modest improvement in credit markets over the past few days, the former is now seen as somewhat more likely. Short-term rates would likely drop a little under alternative B and more sharply under A, whereas they might move up a little under C. Longer-term yields could decline noticeably under alternative A if the statement and the action prompted greater concern among market participants about the outlook. The inconclusive risk assessment of alternative B would likely surprise market participants and might prompt some volatility as they attempted to discern your message. But all things considered, the rate actions and the statements associated with alternatives B and C do not seem sharply at odds with expectations, and we would not expect large net market reactions.

CHAIRMAN BERNANKE. Thank you. Are there any questions? If not, we'll have our policy go-round. Many people have already tipped their hands. We do have a 2:15 constraint, so I hope that people will keep that in mind. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. Having been a part of this policy group for a while, the one thing I can tell you with certainty is that, no matter what we do today, it will be criticized, [laughter] and unlike us, our critics will be absolutely confident in their position. So having recognized that, I would feel comfortable if the Committee moves down 50 basis points today, and if possible, I would like to be certain that we don't convey that other moves will follow

in the future unless the economic and inflation outlooks require it. There are a couple of reasons for this. The first is obvious: the turmoil and the increased uncertainty about the future, which I think as a monetary policy group we have to take into consideration. Second, as I said in my earlier remarks, I think that our effective policy has become tighter over the past year and, therefore, it warrants some reduction in real rates. This will take us a little bit closer toward neutral, which I think is an appropriate place for us to be.

With that said, as far as the statement goes, I feel most comfortable with alternative B. That covers one part of my reason for wanting this reduction, and I think that the inflation outlook and the real rates can go unsaid for the time being. I would also just mention that, depending on how our conversation about the auction credit facility goes, I would be comfortable with an appropriate discount rate of the same amount or, as I said in our earlier video conferences, I would not have any opposition to that discount rate coming down an additional 25 basis points beyond what I'm recommending here for the fed funds rate. Thank you.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. As many of you might imagine, I've struggled mightily with this particular decision. My outlook for the economy has changed sufficiently for me to support a cut in the fed funds rate at this meeting. My reasoning may be a little different from that of some of you; nonetheless it leads to the same outcome. My view is in many ways similar to that of President Evans—that economic growth has slowed, and it is likely to be somewhat slower into 2008. Thus my view that the equilibrium real rate has declined and its forecast has declined somewhat leads to my view that the funds rate needs to follow that real rate down. Also, given the current behavior of inflation, I am more comfortable moving toward what I would consider to be a more neutral rate.

If we do cut the funds rate today, however, I believe that how we communicate that is far more important than anything that we may do in a long time. This is particularly true since we have not been particularly clear about our inflation goals. As I mentioned in my earlier comments, I'd be much more comfortable with this if we had a numerical target, which would help anchor expectations. I think we need to convey the idea that our policy, as many have said, is based on our forecast for growth and inflation and that it is forward looking. That forecast has changed, and we have lowered interest rates consistent with that revision. With that change in policy, we need to have a balance-of-risks statement that is much more balanced in its assessment; moreover, we need to convey to the market that we expect to see some weak data in future months but that those data to a large degree are already built into our forecast. The weaker-than-expected data in the coming months will not necessarily result in a new forecast. For example, I won't be revising my forecast just because the September employment report comes in weak. It's only when we accumulate sufficient evidence that the economy is veering from our new projected path that we would want to revise our forecast and perhaps our policy, although I do want to remind everyone that revisions can go both ways. We might be revising our growth forecast up if the evidence suggests that we've been too pessimistic about housing or about bank credit availability or, as Dave Stockton mentioned, about consumer sentiment. Similarly, we might find that we've been too optimistic about inflation if inflation expectations rise. I think it is crucial that we try to convey these ideas to the public, if not in the statement then at least in the minutes and our speeches going forward. Let me note that our decision to produce our forecasts on a more frequent basis will be a major step forward in actually trying to convey this type of information.

I think it would be a mistake, as President Hoenig suggests, to set up expectations with our language that the rate cut today is necessarily or even likely the start of a series of rate cuts. This

expectation could even undermine our action to the extent that it causes consumers and businesses to postpone spending until they think we're done and could give the impression that, with each new piece of weak data, we'll be lowering the funds rate further even though we have already incorporated that into our forecast. This reasoning leads me to think that, if we're going to cut rates today, I would prefer to do 50 basis points, provided—and it's a big proviso—that we work hard in our statement to convey the idea that the action we are taking is based on something like balanced risks. We have brought the rate to a level that we think is consistent with our new forecast and consistent with our goals of inflation and output growth. In fact, we may even be on hold for a while after this if things pan out according to what the Greenbook suggests. I think a 25 basis point cut would risk setting up expectations for further cuts, which perhaps would be read as taking the same strategy to lower rates as we took to raise them. I want to avoid that. I do realize there's some risk that a more aggressive action could actually reignite inflation expectations. Vice Chairman Geithner made three good points about what the risks of a more aggressive action are: expectations of inflation, fear in the marketplace that we see something they don't and that the economy is actually worse than they're predicting, and the potential for fueling those people who think we are bailing people out and thereby creating moral hazard. Those are risks. I don't deny that. But I think they are manageable, particularly if we mitigate them through our statement by saying that we now think risks are balanced and conveying the forward-looking impressions that I have given.

This brings me to language. Of the three alternatives in the Bluebook, obviously in terms of rate cuts, alternative B is probably where I'd start, although I'm more inclined to have a more balanced approach to risk in paragraph 4. In fact, something more like paragraph 4 in alternative D would suit me better, but perhaps a simpler way would be to rewrite paragraph 4 as follows. This is just a suggestion—it's a little shorter: "With this action, the Committee judges that the downside

risks to economic growth are now roughly balanced by the upside risks to inflation. The Committee will continue to monitor incoming economic information relative to the outlook and act as needed to foster price stability and sustainable economic growth.” That is a little shorter and conveys the kind of balance that I think is important. In some versions of the statement, we have had a little too much of a temptation to promote the idea that we can fine-tune the economy, and I think that’s a dangerous and slippery slope. With regard to the rationale, I’m happy with paragraph 3 on inflation. Indeed, I noticed that there was no capacity utilization in that statement, which pleases me no end. [Laughter] You know, we have to take small victories when we can.

I would like to see some changes to paragraph 2. In particular, I’d like us to say a little less about the disruptions in the financial markets. I think this has the potential to confuse people—that our move is being taken as a desire to bail out bad actors—and that could feed into moral hazard. We are moving because our outlook for the broader economy is weakening. The tightening of credit conditions may have the potential to affect the real economy, and that’s why we are acting preemptively. So I would again try to simplify paragraph 2, and I suggest the following language: “Economic growth was moderate during the first half of the year; but labor market strength has moderated, and the housing correction appears to have intensified and may be exacerbated by the tightening of credit conditions. Today’s action is intended to help forestall some of the potential adverse effects of those events on the broader economy and to promote moderate growth over time.” Finally, as I said earlier, I believe it will be very important to communicate, in the minutes and perhaps our speeches going forward, that our forecast incorporates weak data in the near term and, although we may individually have different views as to what that near term might look like, that forecast has been incorporated in our funds rate assessment and we intend to alter our bias or

our policy only if our forecast changes appreciably in the months to come. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. I think there's a general consensus that we should ease. To me the question is not whether to ease but how much is appropriate. To ease by 25 basis points, I think, could be justified by slow housing and weakening labor markets in the absence of any financial turmoil. However, I'm concerned that a 25 basis point ease today might very well need to be followed by another ease, quite possibly before the next meeting. Given the economic slowing we have seen and the additional slowing that is already likely as a result of the increase in many short-term interest rates, I prefer a more aggressive approach. A 50 basis point reduction will offset some of the tightening that has already occurred in short-term interest rates and will reduce the likelihood that the most pessimistic outcomes for housing prices and residential investment will occur. Furthermore, it seems appropriate insurance against tail events given that inflation pressures are unlikely to be a problem given the current economic outlook. Alternative B in conjunction with other actions designed to improve liquidity seems the most appropriate given the current economic outlook.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. I've already said that I don't see that the risk is on the inflation front right now, although clearly we have to keep monitoring inflation, and that the serious risk is the nonlinear downward spiral that could occur. Of course, the big problem is really the issue of information revelation and price discovery. I want to point out that there are really two sources of this. One is that it's very difficult for the market to figure out what the value of assets in these structured products is. Clearly, that will take a long time to work out, and it is not something that monetary

policy can do anything about. The second source of the problem of price discovery is the fear that, in fact, we might have a severe economic downturn, and we can do something about that. So in this context a cut is not controversial because everybody is coming to the conclusion that we should cut the federal funds rate by 50 basis points and, in particular, that we want to get ahead of the curve to indicate to the markets that we are on top of this and that we are trying to remove the downside tail that we're particularly worried about.

But I want to talk a little about a somewhat longer-run perspective on monetary policy strategy and how we might proceed from here. The way I think about this is that the situations we have to deal with fall into two camps. The normal situation is when things are fairly linear, when we don't have financial disruptions. In that case, there is a lot of reason to have what has been characterized in the academic literature as policy inertia—that is, the idea that, when you move the federal funds rate, you don't move it back quickly and, in fact, you have very persistent federal funds rate moves. Indeed, I think that is the right thing to do under normal circumstances. Clearly, there's an issue that moving a very short-term interest rate will not have an effect unless people expect it to persist. Because the longer-run part of the term structure is more relevant to people's decisions in terms of spending, there's a very strong case for pursuing things in a persistent way. Also, there is always a problem that, when you reverse, people may say, "Gee, you didn't know what you were doing, and you had to change your mind?" So there's always this issue of flip-flopping that you have to be concerned about. The other situation is exactly the environment we're in, when you really have to take out insurance against something that has the potential to create a downward spiral that's hard to control. It's particularly imperative in that situation that you get ahead of the curve. In fact, there's a very strong case to make sure in that situation that you emphasize to the markets that you are trying to take out insurance against the downward spiral. But



if you are successful, things may start to turn around, and if things go the right way, which is what you hope happens, then you want to reverse course. So in the projections that I provided, I did something that was unusual. I think I was the only person to have a rate reversal in the projections. Oh, you did, too? Okay. So I had us going down 50 at this meeting. I thought there was a possibility—though I hope not—that we might have to go 50 at the next meeting and, if we did, that would certainly be enough, and then we would move back up afterwards. So in this context, I think that we really do have to think in terms of potential reversals and, therefore, to not be scared of overshooting a bit. There tends to be a lot of inertia in the way we do monetary policy—it is well documented. There's even inertia in general, just in that we have nineteen participants at a table. As an academic, I mentioned to Don Kohn at one point that sometimes I think these meetings have elements of faculty meetings, and that is not always something that you enjoy. [Laughter] Some of you guys may not have experienced that, but it's a lot of fun. So I think the bottom line here is that we have to be prepared to think about being much more aggressive, not just now but even in the future. However, I do want to point out that this does not mean that we should have an alternative that indicates that we are going to do further cuts in the future. I strongly advocate alternative B because, by aggressive action now, we may start turning the markets around and, if that's the case, then it will not be necessary for us to quickly do more. So we do not want to say to the markets that we have to keep on going when we're hoping that we won't have to keep on going. I think that's extremely important in thinking about where we are right now.

Another issue in terms of an extremely aggressive policy and then possibly doing reversals is the moral hazard context. Again, I think this is a communication issue. I have a slight disagreement with President Plosser in that I think we have to talk about the financial market disruptions because it is very important to indicate that, in being very aggressive, we are not losing

sight of our inflation goals and that this is a case of worrying about the downside tail that we have to deal with and really showing that we're on the ball in that context. So we're in a slightly different situation from the normal one, and I would advocate keeping the discussion of financial disruptions in our statement the way we have it now. Thank you.

CHAIRMAN BERNANKE. Thank you. As you know, I'm an advocate of two-day meetings. This is exactly why. Michelle informs me that our true drop-dead time is 1:45. So we do need, please, to be efficient. Next is President Lockhart.

MR. LOCKHART. Well, in my earlier remarks I stated my reasons for supporting 50 basis points, so I will play Calvin Coolidge here—that is, 50 basis points, alternative B. It's important that we neither signal further actions nor suggest that we're through and that we preserve some flexibility because of the uncertainty. So that's my comment. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. Given the shift that I am projecting in economic outlook, I think that a more decisive action is called for today, and I support a 50 basis point cut in the fed funds target rate. In the past few meetings I was in favor of setting our fed funds target rate above neutral to secure progress for disinflation, but that stance no longer seems compelling. Recent inflation reports have been encouraging, and my outlook for inflation shows inflation remaining in an acceptable range. Furthermore, an above-neutral stance does not seem prudent given my projection for economic growth. I'm in favor of moving our policy stance back to neutral. Obviously it is difficult to know exactly where that is; but if the economy is in the midst of a rapid adjustment, I would prefer not to be behind the curve. So I would prefer not to be chasing neutral down. Gradualism has its place, but in this instance I would prefer a more aggressive move

today and to not leave markets with an expectation of a long sequence of moves, as others have already noted.

I prefer the language of alternative B. Yes, we may see a great falloff in confidence and a further deterioration in the economic outlook, but the recent business pessimism that I talked about earlier may also prove to be unfounded. Therefore, I'd prefer not to lock ourselves into further rate reductions. I also like the uncertainty language that's been added to the new version of alternative B. I think, again, with the 50 basis point move today there's a good chance that we'll be close to neutral, and that's exactly where I think we should be with the uncertainty that many of us see in the outlook. I also take very seriously the risk of undermining the appropriate pricing of risk in financial markets that we face. The long-run success of a decisive move today pivots on the ability to make clear that we take such action in recognition of the current economic environment and that it is not a rush to protect investors from poor past business decisions. So I support a clear statement that, should be we later find ourselves in calmer financial waters and stronger economic winds, we will move quickly to affirm our commitment to achieving and maintaining price stability. Now, because of this preference for downplaying the financial market disruptions, I think a simple way to remove at least one reference to them is to end paragraph 2 after the word "arise"—so "today's action is intended to help forestall some of the adverse effects on the broader economy that might otherwise arise." That gets rid of one reference to disruptions in financial markets. Also, the last part of that statement on promoting moderate growth over time almost gets lost in that language, so it might be simpler to just end the paragraph after "arise." Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you very much. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I think the actual signs of softness we've seen are significant enough to warrant a 25 basis point cut in the fed funds rate. I expect that the

slowdown is going to be a little less severe than that in the Greenbook, and I'm concerned about the likelihood of inflation's remaining above my objective. Arguments for a larger cut appear to rest on the possibility that financial turbulence since last month could cause significant further reductions in real activity. I think that's certainly a plausible possibility, and we can't rule it out at this point. But I don't see it as extremely likely, and so my preference is for a cut of 25 basis points. I would describe that preference as a mild one, and I could support a 50 basis point cut. I just have this hunch that a 50 basis point cut might make it easier for us to resist a further cut two meetings down the road.

Whichever we choose, though, I'm very concerned about how we justify our actions, and I share the concerns of Presidents Plosser and Pinalto about paragraph 2. That language motivates the cut as a way of taking out insurance against the possible effects of financial market turmoil. I worry that, if we tie our actions too closely to the expected effects of financial market conditions, as much as we are concerned about this, we may make it harder to respond appropriately down the road if the data indicate that we should take back some rate reductions. The sense of fragility in financial markets could well persist, and as long as it does, so will the possibility that financial market volatility could create a drag on spending and growth. The persistence of that fragility could hold us back from reversing course if we find that real indicators and inflation data indicate that we ought to. If we do reduce the target rate by 50 basis points, I think we should remove the tilt. I liked the original version of alternative B that was circulated in the Bluebook. As drafted now, it talks about uncertainty, and one could argue that's a mean-preserving spread, but I think in the context it's going to be read as the equivalent of a downward tilt. Thank you.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. Given my outlook for growth and inflation and my assessment of the neutral federal funds rate, I can readily agree to 50 basis points in cuts on a cumulative basis. I came into this meeting having a slight preference for alternative C and doing 25 basis points today with an expectation of 25 at the next meeting. I thought that that would take us to a point at which more data would come out and it would be more likely that we could perhaps stop at a 4¾ percent fed funds rate. Obviously, if we cut 50 basis points today, and I have no disagreement with that, I think it is then a little more difficult to stop there. I agree with some of the previous comments that any action beyond that should be based on incoming data that we don't expect. That is kind of difficult from a communication standpoint. But I'm fine with alternative B. In fact, the language is fine.

I'd just like to take a minute to talk about risk management. We talked a lot about that in terms of tail risk and nonlinearities and insurance, and I think this is quite appropriate in the current environment. But we have to continue to ask, What happens in the more likely event that things turn out better than these tail events? That's why they're called tail events. So I agree with Governor Mishkin that we have to be very careful to think about taking them back. If we respond aggressively to address financial conditions beyond our dual mandate goals, we should be prepared to retrace that pattern of federal funds rate cuts if conditions calm. With respect to the comments that Governor Kroszner made about inflation, I think you have to be a little careful. My memory of '98 was that we actually had a tightening bias when the Russian default–LTCM came in. We cut 75 basis points. Things got better. By the spring, we were debating whether or not we should tighten. By the June meeting, we did begin to tighten, and we went up to 6½ percent. My memory of core CPI in 2000 is that it increased about ¾ percentage point. I think there was some divergence

between PCE and CPI over that time period. It is something to keep in mind, but I can support 50 today.

CHAIRMAN BERNANKE. President Evans joins the table with twelve years of experience already. [Laughter]

CHAIRMAN BERNANKE. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I'll be glad if you don't tell how many years of experience I have around this table. [Laughter] I support the action and the language of alternative B for the reasons that have been given by many others around this table. I think that the odds favor a significant reduction in aggregate demand owing to the financial conditions we've all been talking about. I agree with Governor Mishkin that part of the disruptive effects of the financial conditions are the small chance of a very adverse effect—the sort of interactions you were talking about, Mr. Chairman. Holding back and doing just 25 in that context would be a mistake. Going ahead and doing 50 will largely relieve some uncertainty.

With regard to some of the comments about language, the discussion of credit conditions in financial markets in paragraph 2, I guess my read of what we talked about today was just this, and it seems to me that the way it is now is very transparent. It's a nice replication of the discussion we have had, and so I don't see a need to subtract language about financial markets from this. With regard to the balance of risks in paragraph 4, also consistent with our discussion is the sense that there's a huge amount of uncertainty about how things are going to evolve, both the markets and the effect on the economy. I don't feel as though I know enough to say that the risks are balanced. I don't know. The range of outcomes is just too wide, and there's very little central tendency in it. So I'd be very uncomfortable with a statement saying that I kind of thought the risks were balanced. I am much more comfortable with a statement that says there is a lot of uncertainty out there and

that's uncertainty around the economic outlook. So I think the current language in paragraph 4 is also a nice representation of the discussion we had today and consistent with our ignorance.

I'm not concerned about the moral hazard issues. I think our job is to keep the economy at full employment and price stability and let asset markets fluctuate around that. There will be winners and losers. That's fine. The Congress told us to have maximum employment and stable prices, and that's what we should be about here. Sometimes that means you need to move to keep employment maximum or prices stable, and we need to take account of the asset markets but not worry about the effects of those actions on asset markets per se. Holding back—inertia—because of concerns about moral hazard would be a serious mistake. We shouldn't hold interest rates higher than they need to be in order to impose additional cost on borrowers to teach lenders a lesson. Too many innocent bystanders would be hurt in that process. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I strongly support the Bluebook alternative B. I think a 50 basis point cut right away is appropriate, and I like the language. My reasons for supporting this action are, first, that inflation has been quite well behaved. I'm pretty sanguine about the future. Second, I think the available economic data that preceded the financial shock are separate from it and support a fed funds rate cut entirely on their own. You can see that just by looking at the backward-looking Taylor rules in the Bluebook, which suggest that the fed funds rate in the third and fourth quarters should be well below where it is now. In part, inflation has come down, and as President Hoenig and others have pointed out, that's raised the real fed funds rate—so a real rate of 3¼ percent now. I think the stance of policy is unnecessarily restrictive, and that is before recent developments. Third, of course, is that the financial shock has made financial conditions more restrictive. Even if things sort themselves out, I think the conditions will remain

more restrictive. I thought the Bluebook gave us a good method for seeing how much more in showing that the Greenbook implicit equilibrium funds rate has declined 50 basis points since August; that says to me that a 50 basis point cut is not too much to try to neutralize the shock and try to forestall it from damaging the economy. As I contemplate the issue of 50 today or 25 with the presumption that we would do 25 more in October, I find myself strongly favoring 50 today. I think we should be taking a forward-looking approach and trying to forestall damage.

I agree with Governor Mishkin that, should developments later on call for us to reverse what we have done, we should not hesitate to do it. I really don't like the message that a 25 basis point cut would essentially send to markets. It would seem to say, "Well, why did we do 25 basis points today? It's because we want to wait and monitor incoming data and see what effect the shock has." I think that's an unwise message to send. First, it says that the policy is reactive rather than forward looking, and I hope we're going to be coming out with a communication package that sends a rather different message. Also, I really don't think we're going to see that much in the spending data over the next six weeks that's going to be convincing. I am also very concerned about the asymmetric nature of the risks that we face and the possibility of the type of nonlinear, negative dynamics that Governors Mishkin and Kohn and you, Mr. Chairman, have mentioned.

I like the language in the statement. I think it's very well crafted. I like the idea of discussing forestalling negative effects and our hope and sort of optimism that we'll be able to do it by sufficient action today. I don't like the idea of putting out a statement today that says there are continuing asymmetric downside risks. It leaves us open to the question, "If you think that, then why didn't you do more?" I agree with Governor Kohn. I like the risk assessment because I honestly don't know exactly what the risks are. I like the approach that we're going to watch and



do what is appropriate as events unwind in the future, and I don't want to have to say that I now feel the downside risks are essentially balanced with other risks to inflation. I don't know that.

CHAIRMAN BERNANKE. Thank you. President Poole.

MR. POOLE. Thank you, Mr. Chairman. I favor a cut of 50 basis points, and I think that the alternative B language does what we need it to do. It's very much in our interest that the markets settle down sooner rather than later. I also think that the moral hazard argument in this context is simply wrong. It's wrong because if you take an insurance company context, there the issue is that the policyholder takes action that is adverse to the interest of the insurance company. It's in our interest and it's in the economy's interest that the markets settle down sooner rather than later. We want subprime paper to trade. If it's 30 cents on the dollar, okay. Nobody is talking about subprime paper trading at 100 cents on the dollar or 98 cents on the dollar. We want the market to function so that the positions can be adjusted and so that we can go back to a normal situation in which the paper trades for what it's really worth. If the data and the anecdotal information justify going down 50 and going down only 50, our best chance to make that stick is actually to do it all at once because, if we can leave rates unchanged in our October meeting, that sets the default option for the following meeting also to be no change rather than further action. So it seems to me our best chance of avoiding an overreaction is to do 50 now and then make the case that we're waiting to see how all of that works and we don't think that as time goes on it will probably be necessary to do anything more. Thank you.

CHAIRMAN BERNANKE. Thank you. President Stern.

MR. STERN. Thank you, Mr. Chairman. Well, I favor meaningful action today, so that's a 50 basis point reduction in the fed funds rate target along the lines of alternative B. I think I pretty well laid out the reasons for that in my earlier comments. I think the financial disruptions do matter

for the short-term path of the economy in a negative way. My judgment is that it is likely to be nontrivial, and so we should respond to that, especially when underlying inflation seems to be moving in the right direction and, if anything, moving a little more rapidly than I earlier anticipated.

With regard to language, well, it's very tempting to carry on about that and make Michelle even more nervous, [laughter] but I'm convinced as I listen to the conversation that beauty really is in the eyes of the beholder. I would make only two comments. First, the language in alternative B is basically fine with me. I think the final paragraph, the assessment of risk, leaves our options open, which to me is what we're trying to do. I don't have a conviction about what we're going to want to do in October, and I don't worry very much about whether at some point down the road—I don't think it's going to be all that soon because I don't think we'll have enough evidence—we will decide we need to reverse some or all of whatever we wind up doing. That's okay, too, because we'll be able to explain that fairly readily when the time comes. Second, I don't understand these suggestions to take out references to financial market conditions. We devoted a lot of time to talking about that subject today and at the last meeting, and so to act as if it somehow hasn't been important in what we're considering here just doesn't make sense to me. Thank you.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Well, Mr. Chairman, I already presented my position. Like President Evans, I came into this room expecting to argue for a 25 basis point cut. Unlike President Evans, I'm still there. [Laughter] I just want to record, since I've already lost the battle, two points. I think Vice Chairman Geithner said it right. Governor Kohn is absolutely correct. We should be guided by what we think is going to happen in the economy and not be pushed around by the markets. That's one reason I'm in favor of 25 basis points and not 50, with an eye open to possibly moving further later. But the point that Vice Chairman Geithner made that I think is relevant here is that we should

direct policy not to insulate but to facilitate. I think that's a key point. Another is that we need to demonstrate credibility that we have a feel for what's happening in the markets. On that basis, we need to at least be mindful that this is the first decision to move under the new FOMC. I'm a little worried, despite my enormous admiration for President Yellen, about her interpretation of what is reactive. Indeed, we might be viewed as being reactive by moving 50 basis points. I think that's a real risk. What we say, therefore, is very important—not just in the statement but also in our subsequent minutes and speeches, as President Plosser said. I'm, therefore, a little sensitive to two references to developments in financial markets. Yes, that's what we talked about, but getting ahead of the curve, we can state it too strongly and look as though we're just way too reactive, particularly given that this is the first decision to cut. As President Rosengren said, there's no question that we're going to ease; the question is how much. The only suggestion I would have on the wording is to refer to the financial markets once rather than twice. The other thing I would ask to be reassured on, Mr. Chairman, is that, if we're going to go to 50 basis points, it is not a lock that we will put forward the new credit facility because I think doing that simultaneously with 50 basis points would basically confirm that we are reactive and that we're overreacting to the markets.

Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Just a quick point on moral hazard—I think there are fair concerns about it. The losses that have been felt in the markets in the past six weeks—that money is gone. It is not coming back. It is true that some of these institutions will find new ways, create new products, buy assets cheap, but that lesson has been learned. Behavior is changed. I won't say forever [laughter] because that is an awfully long time, but it is changed for purposes of this cycle. Profit profiles of all these financial institutions are now fundamentally different.

Nondepository institutions are looking at their access to capital in a dramatically different way, thinking about whether they have business models that work. So I think it overstates our ability to suggest that, whether we move 50 or more over the ensuing months, we would somehow fix that and make things like they once were. So I think the moral hazard argument in this context is really a straw man that I just wanted, after Governor Kohn's comment, to kick one more time.

In terms of the stance of monetary policy, as we've discussed, the equilibrium rate here is a function of fed funds and a function of what's happening in the real capital markets. The real capital markets are fundamentally different, and so a reduction in the fed funds rate today of 50 basis points may or may not be sufficient to find some new equilibrium. I think we will need to continue to evaluate that as we go forward. Bottom line on the statement, I support alternative B and the 50 basis point reduction. I think the markets will have some genuine consternation this afternoon and in the ensuing days in figuring out what we mean by paragraph 4. As others have said, there is some ambiguity, but I suspect it is inevitable given that we really don't know what our next actions will be. So I support alternative B as written. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thank you, Mr. Chairman. As I mentioned before, from a risk-management perspective I think it's very sensible to make a 50 basis point cut. We have an environment in which the economy has been growing modestly. Some of the numbers that we've seen recently—the lower numbers in the labor market in the revisions from the previous months as well as from August—presumably had nothing to do with the August financial turmoil or I think it's highly unlikely that the August numbers had anything to do with it. The housing market was turning down. So even though we have been growing a little more strongly, we're really coming in facing headwinds in some important markets. As the Chairman mentioned, the interaction between

those two leads to a potential for downside risk, particularly in light of the financial market turmoil that we've been seeing. I think it's important to be aware of that and to take that into account in undertaking our monetary policy actions.

Also, as I've mentioned before and as others have mentioned, even given the dramatic changes that we've seen in the past month in market expectations about what we are going to do, we have not seen an uptick in inflation expectations in terms either of surveys or of the markets, which heartens me that a 50 basis point action is unlikely to have a large negative effect on expectations about the future path of inflation, particularly, I think, given the language in alternative B.

I don't see this at all as being reactive. One thing that I'm extremely pleased to see is that the FOMC did not have an intermeeting cut. I think that would have been seen as reactive. Remember back in 1998. The LTCM situation was worked out in late September. There was the meeting with the 25 basis point cut, and then there was the concern with another 25 basis point cut that came after that, and then the following meeting they did it. There was an intermeeting move. That seemed much more reactive. I think our approach has been very level-headed, and that is one thing that has allowed the expected inflation rates to stay stable even as they expect us to cut the policy rate. So I'm very much heartened by that. Then with respect to what Charlie and others have brought up about reversals, that's very important. Exactly as President Evans said—pardon me for reverting to your civilian name—[laughter] certainly what happened was that, by June, the FOMC decided to reverse and then in the next three meetings reversed the 75 basis points. The FOMC went up to 6½ percent, and only about six or seven months later dramatically reversed that. Many people ex post have said moving up that much was ill-advised. Even before September 11, the FOMC had dropped interest rates approximately 400 basis points in a very short time, suggesting a

very rapid reversal. So I'm not sure that it was necessary to go up to those heights to forestall inflation pressure.

So in this circumstance, I'm very supportive of alternative B. I think it will be read well by the markets that we're aware of what's going on. We haven't overreacted. We haven't been reactive. We've waited until our meeting, and we've left our options open in alternative B, honestly admitting that we are uncertain about what is going forward and leaving open the possibility of future actions. Taking a stronger action now has the potential to help unlodge the logjam in the markets, and we may have to take fewer actions in the future.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN GEITHNER. I support, Mr. Chairman, cutting the fed funds rate 50 basis points today and the language in alternative B, and I cede the rest of my time to you.

CHAIRMAN BERNANKE. Thank you. Thank you very much, everyone. The one person at the table who I know is going to be right is President Hoenig, who says that whatever we do is going to be criticized. I can write the *Wall Street Journal* editorial for tomorrow. [Laughter] I just want to say that I think that moral hazard is a terribly misunderstood idea and that as the central bank we have a responsibility to help markets function normally and to promote economic stability broadly speaking. We are not in the business of bailing out individuals or businesses. As long as we make that distinction, I think we're fine, but it may be history that agrees to that rather than the newspapers.

So I do advocate 50 basis points. The modal assessment of the Greenbook suggests that at least 50 basis points are needed to restore a pre-financial-crisis neutrality. There have been some differences about how severe this is likely to be, but something on that order of magnitude seems about right. There seem to be significant tail risks, and I think some insurance is worthwhile. Quite

frankly, I thought about the alternative C option—25 basis points and a downward bias. One of the concerns I have would be that turmoil during the intermeeting period would sort of force us to come in and do the next 25, and I would rather say that we did what we had to do—we are moving at the meeting—and let the markets absorb that. I also want to agree with Rick and others who have noted that we should be prepared to take this back, and I state that for the record.

On the statement, I prefer alternative B. I have struggled with President Pianalto's interesting suggestion about deleting the last clause in paragraph 2. I guess in the end I would prefer to leave it as it is. What this is doing is two things. First, we're trying very much to clarify in this paragraph that what we care about are the effects on the broader economy. That is, financial market disruptions have occurred, but we are trying to ameliorate the effects on the broader economy. Second, we need in some sense to play a little defense in that this is a sharp change from the statement of August 7. What has changed since August 7? Well, clearly, the most obvious thing that has changed is the financial market situation, which in turn has fed through to housing and other parts of the economy.

With respect to the assessment of risks, I think what the market wants to hear is that we get it, that we're here, that we are ready to move as needed, and that we pay attention to both parts of our mandate. I do think that it's a little premature to make that a balance of risks, and the inherent flexibility here is useful. President Lacker's comment that this is actually a downside balance of risks is an interesting one. It might be taken that way to the extent that markets think that the economy will deteriorate much further and the Fed will have to respond. But our perspective is that we will respond as needed, and we should be careful to emphasize that in public—in the minutes and elsewhere. So that's my recommendation—50 basis points and alternative B. Are there further comments? If not, could you please call the roll?

MS. DANKER. I'll be reading the directive from page 35 of the Bluebook, and the assessment of risks from the table distributed today.

"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 4¾ percent."

Then: "Developments in financial markets since the Committee's last regular meeting have increased the uncertainty surrounding the economic outlook. The Committee will continue to assess the effects of these and other developments on economic prospects and will act as needed to foster price stability and sustainable economic growth."

Chairman Bernanke	Yes
Vice Chairman Geithner	Yes
President Evans	Yes
President Hoenig	Yes
Governor Kohn	Yes
Governor Kroszner	Yes
Governor Mishkin	Yes
President Poole	Yes
President Rosengren	Yes
Governor Warsh	Yes

CHAIRMAN BERNANKE. Thank you very much. We can recess now for half an hour for lunch. The Board of Governors will vote, but the rest can recess for lunch. [Laughter] During lunch, our Congressional Liaison person, Laricke Blanchard, will give us an informal update on congressional matters. We will try to reconvene around 2:00.

[Meeting recessed for lunch]

CHAIRMAN BERNANKE. Why don't we reconvene our meeting? Item 5 on the agenda is communication. We have a couple of things to do. Scott Alvarez and his colleagues have prepared a memo, which you received, on the issue of voting on the full statement. Could



you give us a brief overview, Scott, and then I'd like, if possible, just to get a sense of the table.

I hope we don't have to get into a lengthy discussion.

MR. ALVAREZ. I was delighted to hear this morning that employment of lawyers is now a factor in assessing the robustness of the economy. I recommend that in the Committee's drive for transparency, however, the FOMC not disclose this new factor because undoubtedly there will be those among my colleagues in the legal profession who will sue for a more prominent and permanent place in the Committee's forecasting models. Today, I've been asked to address an element of the Committee's governance. Over time, a consensus appears to have developed that the Committee would prefer to change its current practice of approving only the assessment of risk portion of the policy announcement issued after each Committee meeting and instead approve the entire statement. If that is the Committee's desire, there are several methods for achieving that result. Each method has advantages and disadvantages. A key concern in choosing an alternative involves the amount of flexibility that the Committee wishes to retain to allow other methods for announcing its decisions, especially in emergency, intermeeting, and special circumstances. A second key concern is how much attention the Committee wants to draw to its change in practice.

The first and simplest alternative would be for the Committee just to begin voting on the entire statement along with the policy action. This approach maintains the maximum flexibility for the Committee to alter its practice in different situations and to adjust the content of the statement. This approach also maintains the flexibility of the Chairman to issue a statement in times of emergency or special need. If the Committee chooses this alternative, the Committee also controls the amount of prominence that it calls to this change in the minutes. If the Committee believes this change is significant, it may include a robust discussion in the minutes. If it views the change as not significant, it may have no or only a brief notice in the minutes.

A second and slightly more formal alternative would be to adopt a nonbinding resolution outlining the Committee's desired new practice. A nonbinding resolution provides a more formal vehicle than the first alternative for explaining the change in voting practice in the minutes. At the same time, because the resolution would be nonbinding, it retains the flexibility of simply voting on the matter.

The remaining two alternatives are the most formal and involve adopting a binding resolution or changing the Committee's rules to require Committee approval of statements issued at each regularly scheduled meeting. These alternatives are more binding because they require further deliberate Committee action to change the practice in the future. A rule change would also be very visible because, in addition to an explanation in the Committee's minutes, a rule change entails publication in the code of federal regulations. This would attract attention in part because the Committee's rules currently do not address voting practices beyond the requirements of a quorum. A formal resolution or a rule change may hold an advantage for a

member who wants to delineate publicly the exact content of the statement. On the other hand, were the Committee to desire to retain flexibility to alter the content of the statement, a rule or resolution would have to be carefully crafted to ensure that flexibility. A binding resolution or a rule change could also limit the flexibility of the Committee and of the Chairman to speak about the FOMC's actions. To date, the Chairman has retained the flexibility to speak for the Committee in emergency and other situations. Indeed, the statement was originally a statement of the Chairman, not of the Committee. If the Committee desires to retain this flexibility and yet adopt a binding resolution or rule, the resolution or rule could be drafted to maintain that flexibility. That concludes my presentation. I would be happy to entertain any questions.

CHAIRMAN BERNANKE. Are there any questions for Scott? Well, it appears that one thing we can do is just do it. Precedents have been pretty effective in this Committee. For example, our circulation of table 1 has become a regular modus operandi. That does leave flexibility. On the other hand, if others would like to go further, that's fine with me. Is it the sense of the Committee that simply beginning to adopt this action would be adequate?

SEVERAL. Yes.

CHAIRMAN BERNANKE. My sense of the table is, then, that we will just begin the practice at the next meeting of voting on the entire statement. That, of course, raises the possibility for dissent based on the statement. We have to use good judgment on that particular decision. If there is dissent on the statement, Scott, it would be explained in the minutes?

MR. ALVAREZ. That's the current practice. That's right.

CHAIRMAN BERNANKE. That's the same practice we use for a dissent on the action.

MR. WARSH. Mr. Chairman?

CHAIRMAN BERNANKE. Yes.

MR. WARSH. I don't feel strongly, but would it make more sense to have this change be consistent in time with changes in communication strategy more broadly? Now, recognizing this is not of the same import, but rather than have a question be raised and then have to explain it

through our communication folks and others, I wonder whether this might not just be sort of a housekeeping footnote as part of a broader communication rollout.

CHAIRMAN BERNANKE. Well, if our communication schedule continues along current lines—and we can discuss that next—it would in fact be in these minutes that we made this decision, right?

MR. KOHN. Well, if we're just going to do it, we haven't had a vote yet.

CHAIRMAN BERNANKE. So would it be okay if we just put this in the October minutes, reflecting the first time we took that action?

MR. KOHN. Right.

MR. ALVAREZ. This would be just a discussion.

CHAIRMAN BERNANKE. All right. In that case, it would be part of the overall description. Okay. That's a good suggestion. Thank you. Anyone else?

MR. LACKER. I'm sorry. I'm confused about that. This is an agenda item at this meeting.

CHAIRMAN BERNANKE. That's true.

MR. LACKER. We could just say that this is our sense at this meeting of what we're going to do now and just leave it at that.

CHAIRMAN BERNANKE. Well, we also have another element coming up right now—an update by Governor Kohn on the communication strategy.

MR. ALVAREZ. The Committee needn't take a formal position today on what it does, particularly if the discussion suggests that the Committee simply wants to act when the time is right. So the minutes could be very general.

MR. LACKER. I don't attach much substance to this. I don't think very many people even know or care or would view this as a change.

CHAIRMAN BERNANKE. All else being equal, we'll try to get it into the October minutes. But if it turns out to be a problem, we'll address it. Any other comments? Don, do you want to update us on the projections?

MR. KOHN. Thank you, Mr. Chairman. We are planning right now to go live with the enhanced projections process after the October meeting. The plan is to have a speech by the Chairman in early November, and then the forecast and its narrative would be published with the minutes of the October meeting, so three weeks into November. I would have to say that's a planning presumption, and we are going to proceed on that basis. But who knows what the circumstances will be when we get to the October meeting. The Committee could well reconsider whether that is the right time to add a new way of communicating about the future, if it's an unsettled time. So we can discuss it again. No votes or final decisions today, but just to alert you about the planning process going forward.

The subcommittee sent out some recommendations in terms of the variables, and that's what we used for this dry run. What we would like from you is, if people have comments on the whole thing or on the particular variables that we used, to hear them. We also sent out some material on uncertainty and how that is portrayed. The most important thing to lock in soon is what variables we are going to ask you to use for the October meeting. We will have a two-day meeting in October. We can discuss things further. We can discuss what the box on uncertainty might look like when it comes out in November. So we don't really need to have a detailed discussion on that—though if you have comments, they would be useful. But we do need to lock

in the variables. So the floor is open for anybody who wants to bring something to the attention of the Committee.

CHAIRMAN BERNANKE. Governor Mishkin.

MR. MISHKIN. I was completely fine with the proposal. The only thing it mentioned that I would slightly differ on is that I would like the box on uncertainty to come out with every forecast narrative—you know, the four times a year deal. The negative is that it would be the same each time, so there would not be much that is new. But when you look at inflation reports that people have done, they frequently have a box that's the same each time. In my view, the issue of making sure that people understand that there's a lot of uncertainty about our forecast is so critical that, even if they ignore a bit because we're putting it out every time and it's just a standard part of the package, I think it is extremely important.

CHAIRMAN BERNANKE. Other comments? Vice Chairman?

VICE CHAIRMAN GEITHNER. I feel generally comfortable with the trajectory you're on and with the evolving shape of this thing. There is one issue still where it seems to me we don't quite have it right, which is that the narrative description does not, because it really cannot, describe the story that is reflected in the central tendency of the forecast. So the narrative is really more a repetition of the numbers and of what is in the tables around dispersion, and that is probably because we haven't given the staff a way to talk about or let us talk about the story that underpins it in some sense. Since a central value in this innovation to the communication regime is to give a bit more texture to the story that underpins the central tendency, it would be worth exploring whether we could figure out a way to design our discussion so that the staff could write a narrative in a way that does a better job of allowing that. With that exception, that qualification, it seems as though what you laid out, Don, makes sense.

CHAIRMAN BERNANKE. I think the staff shouldn't hesitate to talk about different points of view. It is not at all necessary to come up with or try to manufacture a consensus narrative.

VICE CHAIRMAN GEITHNER. I didn't mean to suggest not having anything that reflects the dispersion of views or the uncertainty around those views. But right now it's so skeletal that it doesn't add much value to the tables, and it gives in some ways less texture than what is in the minutes, frankly, about the outlook over time. If the central purpose of this is to animate the set of judgments about the evolution, we could do it a little better that way. This is complicated because we have all sorts of different conditioning assumptions that underpin our forecasts. When those conditioning assumptions vary, you can't really tell much from what the variance in the forecast is. We don't ask people to give a modal and an expected forecast and the difference between the two, even though we ask them about the balance of uncertainty in that sense. So it is hard in some sense, Mr. Chairman, but I didn't mean to suggest you would want to do that because you want to try to force a consensus view.

CHAIRMAN BERNANKE. President Rosengren.

MR. ROSENGREN. A lot of us this morning discussed tail risk, and it does seem that the tables we have right now might not capture the nature of tail risk that actually was critical to a lot of that discussion. Some things that are related to your ability to forecast variables are tied to uncertainty. But looking forward, there are also the kinds of risks, which I don't think we're capturing, that were central to some of our discussion. Is there a way to capture tail risk or the distribution—kind of like the scenarios that are done in the Greenbook, but, in effect, what people were talking about with tail risk? I don't think we're quite there yet, and I don't know

that we need to do it for the first round. But we need to give some more thought to what tail risk means and what we actually mean when we talk about insurance.

CHAIRMAN BERNANKE. We have a section on the risks, though, right?

MR. KOHN. And the skews. It should be possible in that context.

MR. MISHKIN. It's hard to think about exactly how to do that in terms of the survey, but certainly that's exactly where the narrative would have a lot of value because it's really hard to do it just in terms of some kind of standard survey. I hope that in the future we won't have many discussions like today's, but we might. Maybe that could be handled in the narrative.

MR. ROSENGREN. Yes, it gets to the texture that Tim was getting at. I was thinking about maybe having a question that tries to capture it so that we could at least respond to it if it's an important point for us to cover.

CHAIRMAN BERNANKE. Other comments? Okay. Thank you. Our last item is approaches to stabilizing money markets. Let me make, if I might, just a few introductory comments about where this came from and what we're asking of you today. As we have been thinking about various money market issues, two things have come up. One is that there have actually been a surprisingly large number of problems in dollar markets in Europe—that is, banks that need dollar-based funding.

Debbie reminds me that this is a joint Board-FOMC meeting and that I need a motion.

MR. KOHN. I move to close the meeting.

CHAIRMAN BERNANKE. Without objection. Thank you. The first issue is the need for dollar funding and dollar term funding by European banks, which has caused problems in Europe but also has bled over to some extent to dollar markets in the United States. We have been in conversations at various times with Europe about a swap arrangement that would provide

dollars to Europe to address this issue, but the issue has not yet, obviously, been brought to you as a Committee. The second issue that we have been looking at is how to address the stigma of the discount window. Are there ways to provide liquidity that would help normalize money markets, particularly term money markets, and would allow banks to make use of the enormous amount of collateral they have at the discount window, but would avoid the stigma and create a more efficient system? The solution that the staff came up with on that was to have an auction facility that would essentially set an endogenous price and, because it was an auction, it might look more like a good business proposition rather than like a move of desperation and, therefore, would not have the same stigma. So there are these two separate issues—the auction facility as a way of addressing the stigma of the discount window and the swap as a way of getting dollars into the European dollar markets. Some conversations that I had, in particular with President Trichet of the European Central Bank, came up with the possibility of combining these two things, essentially having auctions simultaneously in the United States and in Europe, and then using the swap markets to provide the dollars to the extent that the ECB would like to have them. The Swiss National Bank expressed interest in joining this as well. In a moment you will be hearing from the staff a few details about these proposals.

Now, let me just say a couple of things. First, one thing on governance is that the rules here are that the auction credit facility requires an amendment of regulation, which is a province of the Board, so in that respect it's a Board decision. However, obviously, the Bank presidents are very much involved in this because it would involve discount window management, and therefore, I think it's fair for us to have the discussion of this from the perspective of the entire Committee. Second, the swaps would be, of course, a decision of the FOMC, and they obviously would need a vote.



We began working on this some weeks ago when the markets were in a particularly stressful condition, and our hope was to try to normalize those markets. As I said earlier today, the markets seem to be getting better, and this may not be the exact moment that we want to be doing this. However, it might be a good idea to have this process or, alternatively, the two separate processes—we could do either one without the other—available should market conditions demand it. So what I would like to propose is that we have a presentation; some comments, discussion, and questions from you; and we'll get a sense of the Committee in terms of where you are on this. What I will commit to is that we won't take any votes today, but before using either option or a combination of both options, we will have a videoconference and ask for your formal approval of the swaps and at least your consent to the ACF. So we are not planning to implement this immediately, but we would like to have the possibility of having it as an option, should money markets seem to require it. So with that, let me turn to the staff.

VICE CHAIRMAN GEITHNER. Could I ask a question?

CHAIRMAN BERNANKE. Yes, please.

VICE CHAIRMAN GEITHNER. What does a closed meeting mean, Scott? Does it mean there's a transcript, with a normal release, or there's no transcript?

MR. ALVAREZ. The FOMC continues to be in meeting, and so what is happening here is part of the transcript of the FOMC. But on top of that is a Board meeting. The Board meeting has only minutes. Those minutes are very summary. The current plan is that they won't be released until after Thursday.

VICE CHAIRMAN GEITHNER. But the minutes of the FOMC meeting will be released in two weeks?

CHAIRMAN BERNANKE. They will be very general—something like there was a discussion of means to address money market issues.

VICE CHAIRMAN GEITHNER. Explore the range of options to address.

CHAIRMAN BERNANKE. Exactly. President Lacker.

MR. LACKER. Another question about governance. Maybe this isn't the appropriate time, but do you envision that approval by Reserve Bank boards of directors would be required for this facility? Is that part of the governance, or is that maybe a question for later?

CHAIRMAN BERNANKE. Go ahead.

MR. ALVAREZ. Well, the auction credit facility doesn't require the approval of the Reserve Banks. The Board is required to set the rules for lending under 10B, which is what we'll explain in the program. However, the interest rate on loans under the credit facility would, of course, be established by the Reserve Banks and reviewed and determined by the Board. So depending on the governance of the different Reserve Banks, it may be that the interest rate that is the result of the auction would be something that the board of directors would want to recommend. Our proposal, as you'll hear it later on, will be that the boards of directors adopt the process rather than a particular interest rate, and that would allow the auction to continue over time.

MR. LACKER. All right. So they would have to act to make the rate they set determined by this process.

MR. ALVAREZ. Right. Like seasonal credit works today.

CHAIRMAN BERNANKE. Why don't you go ahead and make your presentation, and then we'll take questions.

MR. MADIGAN. Thank you, Mr. Chairman. Your introductory remarks and the questioning and some answers that we just had covered some of the points that I was

going to make in my introductory comments. It has been a long day already, and you received a detailed memo. So in view of that, we thought we would abbreviate our briefings relative to what we had initially planned.

In response to recent developments, as you know, the staff has proposed consideration of a set of responses that could be coordinated with actions of foreign central banks. We distributed considerable material to you on Friday, the gist of which is proposing an auction credit facility and swap lines for foreign central banks. I'd like to note that a large number of staff here at the Board and at the New York Fed contributed intensive work to that document and to planning for the facility more generally, and I'd like to mention Pat Parkinson and Myron Kwast, whose names were inadvertently omitted from the list of authors.

Under the proposed facility, the Federal Reserve would auction blocks of collateralized twenty-eight-day discount window credit to institutions eligible to borrow from our primary credit program. As the Chairman said, based on discussions with the European Central Bank and the Swiss National Bank, we understand that those institutions are interested in conducting parallel auctions of term dollar credit to institutions located in their jurisdictions. Those institutions have requested, but to date only on a preliminary basis, the establishment of reciprocal currency swaps lines on which they would draw to fund the extensions of dollar credit under such auctions. We have provisionally assumed that \$20 billion of twenty-eight-day ACF loans would be auctioned each week over the course of four weeks, building up to a maximum of \$80 billion. The ECB would, similarly, auction up to \$40 billion, and the Swiss National Bank would auction up to a total of \$20 billion.

Jim Clouse was going to present a briefing providing additional background on the markets and the pros and cons of the proposal, but we have decided to skip that at this point in the interest of time. Jim could answer questions on that if you'd like. But you may not have had a chance to absorb the details of the implementation, and the Reserve Bank Presidents in particular as well as the Board members may be interested in them. Sandy Krieger will talk a little about that, and then Karen Johnson will wrap up with some comments on the swap line. Sandy?

MS. KRIEGER.<sup>4</sup> Thank you. I will discuss at a high level some of the operational aspects of the auction credit facility. Yesterday, SCRM (Subcommittee on Credit Risk Management) members and discount window officers at your Reserve Banks talked together about the operational details. Although they have had only hours to learn and to think about this, they seem to be comfortable with the basics and are helping to work out the open items.

So, how *would* this work? First, the watchwords for implementing this program would be "simple and robust." This means employing many of the procedures that we already use locally to extend discount window credit. The discount staffs have the necessary expertise to receive and to screen bid information. The local Reserve Bank

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<sup>4</sup> Materials used by Ms. Krieger are appended to this transcript (appendix 4).

staff members are in the best position to know the bidders in their District. They would use many of the same procedures they use to accept discount window loan requests. The applications we use to determine adequate collateralization for discount window loan requests would be used to determine acceptability of auction bids, with a supplemental calculation to screen for the excess of collateralization we would be requiring for ACF credit. The discount window “hotline” telephone infrastructure—a number with multiple lines known to depository institutions (DIs) in each District—would be used for Reserve Bank staff to receive and confirm bids and awards from DIs in the District. The SCRM members and discount window officers are working now with Board staff members on a communication plan for outreach to DIs should this facility be implemented.

Let me now walk you briefly through the auction cycle that is in the handout. We have been contemplating that on Friday at noon the Board would announce the terms of the next auction. It would include, for example, “On Monday, October 1, 2007, there will be an auction for up to \$20 billion of twenty-eight-day funds, to be issued on Thursday, October 4, 2007. Bids may be submitted to local Reserve Banks between times X and Y on the auction date. The minimum bid size will be \$50 million, and the minimum bid rate will be Z percent. The auction results will be announced on Wednesday, October 3, at 10 a.m. eastern time.” Details pertaining to the eligibility, the bidding, and the award procedures would be defined in an announcement posted to the Board of Governors’ website, and discount window staff would be available on the announcement date to answer calls to their local hotlines regarding the terms of the specific auction. On the morning of the auction date (typically a Monday), the Reserve Bank staff would perform the necessary calculation to determine the maximum bid size for the eligible DIs in their District, based on collateral pledged. Also on the auction date, Reserve Bank staff members would receive and confirm or reject phone bids during the announced bidding window, following defined procedures. After the close, the Reserve Bank staff would submit formatted information to the auction agent by encrypted e-mail. Next, the auction agent would combine the information from the individual Reserve Banks. A first step would be to constrain the separate bids from branches of the same foreign banking organization to comply with single-bidder rules.

The administration of the other elements of the auction allocation is straightforward. A predefined process would award partial allocations at the stop-out rate when bidding at this rate exceeds the maximum amount expressed in the auction announcement. The auction agent would communicate the awards back to Reserve Banks on Tuesday afternoon, and the Reserve Bank staff would check these against the stop-out rate information that the auction agent provides. On Wednesday, the Board would publicly announce the auction results and post this information to its website. At that point, Reserve Banks would begin to notify the DIs in their respective Districts that submitted winning bids of the awards they would receive the following day and the rate they would be charged. On Thursday, Reserve Banks would post the term credit to the automated application that they currently use for

extensions of credit. Unless otherwise requested by the DI, the credit would be posted to the DI's reserve account at the end of the day.

I have covered most, if not all, the details in the table of auction terms and the auction dateline that are in your handout, and I will turn to Karen to continue our presentation.

MS. JOHNSON. In conjunction with the establishment of the ACF, the staff proposes that the FOMC authorize temporary reciprocal currency arrangements with the European Central Bank and the Swiss National Bank. These facilities would provide dollar financing for parallel credit auctions for euro area and Swiss banks, which the staff understands would be conducted in a manner broadly similar to that provided for U.S. banks by the ACF, which Sandy just described. The proposal is for swap arrangements that would authorize the ECB and the SNB to draw up to \$10 billion and \$5 billion, respectively, each week with individual draws for a period of twenty-eight days. Cumulative totals may reach \$40 billion for the ECB and \$20 billion for the SNB. The swap arrangements would expire after six months unless renewed. The purchases of U.S. dollars with foreign currency would be based on the prevailing spot exchange rate, and the ECB and the SNB would charge their banks and pay interest on the swap at the rate established each week by the U.S. auction.

These temporary swap arrangements are proposed so that dollar funding problems now faced by European banks, particularly at terms longer than overnight, can be addressed in a parallel manner and at the same time that dollar funding problems of U.S. banks are addressed. Improved conditions in European dollar trading would guard against the spillover of volatility in such trading to New York trading and could help reduce term funding pressures in U.S. markets. Establishment of these swap lines in parallel with the ACF could have broad, positive confidence effects. Given the financial positions of these two central banks, the swap lines would involve virtually no credit risk on our part. By providing dollars to the ECB and the SNB to use in their efforts to address the term dollar funding problems in Europe, we benefit the credit markets without ourselves providing support to banks overseas.

CHAIRMAN BERNANKE. Are there questions for the staff? President Fisher.

MR. FISHER. Just so I understand this, let's say Paribas shows up at our auction window. Can they also show up at the European window, or are we going to make sure that there's no duplication? How do you make sure there's no duplication so that foreign banks might get an advantage or vice versa?

MR. MADIGAN. They will be able to bid in both, President Fisher.

MR. DUDLEY. Just as our banks will be able to bid in both.

MR. FISHER. That's why I said vice versa. So for certain banks, holding companies, or organizations, there is really more than the stated limit, right?

MS. JOHNSON. Well, the Europeans are going to impose a structure. It's not "no limit"; it's the sum of the two.

MR. FISHER. I understand that. I just wanted to make sure that that was the case. Thank you.

CHAIRMAN BERNANKE. Governor Kroszner.

MR. KROSZNER. Two things, one related to that. On the first page, you said that you consolidate all the foreign banking organizations. So in the United States they would just operate as one, even though they may have different subsidiaries, and they will be treated as one organization, even if formally they have multiple organizations in the United States.

MS. KRIEGER. Under the single-bidder guidelines, they'd be treated as one. But for extensions of credit, that's done at the local Reserve Bank. So their bids would be combined and treated as one, and then they would be disaggregated so the loans could be booked at the local Reserve Bank.

MR. FISHER. But again, for Paribas, for example, which can come to our discount window, the total sum would be 20 percent for any single credit across the System, even though it might be pieced out by Bank.

MS. KRIEGER. Correct.

MR. FISHER. Thank you.

MR. KROSZNER. Second, in terms of the timing of the auction itself, are there any challenges because of some of the delays here? This seems like a somewhat slower process than

some other auctions that are run—the bids are submitted on Monday, and the notification isn't until Wednesday.

MS. KRIEGER. Yes. We've given ourselves a lot of time just because of the uncertainty associated with it, with an opportunity to change it if we were to do this over time with learning.

MR. KROZNER. So you have the flexibility, if you get used to it, to be able to do it almost in real time.

MS. KRIEGER. Right. The preference is for settlement always to be on Thursday, so we can time it with open market operations and, to the extent that this is or is not combined with actions in Europe, with some time parameters that might be sensitive to European time zones. But in terms of how long it takes to run a somewhat automated and somewhat manual auction, we don't really know. We don't anticipate that it will be that complicated, but we're giving ourselves a little flexibility in the beginning.

MR. MADIGAN. One point in this regard, Governor Kroszner, is that we'll be taking the bids over the telephone. That just means that there is going to be a certain amount of time depending on how many bidders show up. It's not a fully automated process.

CHAIRMAN BERNANKE. President Rosengren, question?

MR. ROSENGREN. I think that this is a very creative solution to thinking about the stigma issue and providing liquidity to the market, so I applaud the effort to try to broaden the tools that we have to think about these kinds of issues. When I was thinking about how this might actually work, I did come up with a couple of operational questions. My thought was that if we had this auction, who would be the most likely to want to take the money out? I could imagine a situation in which you would have five borrowers taking out the full \$20 billion. If

those five were Countrywide, Washington Mutual, and three European banks, it would certainly give the perception that we were focused on financial institutions that had significant risks. In terms of worrying about markets as opposed to institutions, I think there is a potential perception issue. So my first question related to that is the following: You picked 20 percent of the auction; but if you picked a smaller percentage of the auction that any one institution could take, by broadening out the number of institutions, I think there would be more of a perception that it was designed for markets rather than for institutions. Now, I am aware that the offset to that is that you might not take down the whole auction. So the less that any one institution can take, the greater is the risk that you're not fully subscribed, or you presumably could change the amount. But I'd like to hear at least some thought as to how you came up with 20 percent.

The second issue is that when we think about the discount window, which is primarily for overnight loans, there seems to be a bit of ambiguity in terms of whether you are primary or secondary credit, and in this situation I think it starts becoming important. When I think of an institution like Countrywide having a \$4 billion loan, the OTS views them as a 2-rated institution, and I don't know how we would view them if we were regulating them. I do know that the markets seem to be assessing them as being a good bit different from a 2-rated institution. So when we're thinking about an institution that we might have concerns about giving 23A exemptions and an institution that might have difficulty raising funds because the market perception is that they are very, very risky, how comfortable are we with the way the discount window thinks about primary and secondary credit for institutions that the financial markets at least think have a high probability of a fall?

My third question ties to the European banks. It seems for the European banks that the ECB is better positioned to make the credit evaluation of whether they are risky or not risky and



the equivalent of our primary-secondary distinctions. Given that the European banks have the option to borrow, assuming that the swap did go through, it would seem preferable that they borrow in Europe rather than borrow here because I think about the incentives going forward. If a European bank that has financial problems that, say, the German authorities and the German Bank are aware of but we may not be fully aware of borrowed \$4 billion from our liquidity window, I wonder what the incentives are for either the institution or the regulator to fully disclose the nature of the problems. I'd like to get your sense of why you think it necessary for U.S. banks to have access in both locations and for European banks to have access in both locations. Those were the three questions that I had.

MS. KRIEGER. Well, starting with the last question, I think the sense is that it's a dollar funding problem. Obviously, the markets are deepest here, so that's part of the interest in offering it here to the broad range of institutions and the institutions that need it. It is also related to your question about the limits. One thing we did was to look at what the Treasury does as an auctioneer. They have a 35 percent limit. So we were working down from there, trying to see how low we felt comfortable going and not departing from what are typical auction norms. Also, if this is really meant to facilitate funding for those who need it, is there a possibility that, if you go too low, you won't have the desired impact?

MS. JOHNSON. Could I add a couple of thoughts before you move on to the next thing? The concerns of the sort you raised are part of the reason that the swap is being proposed at all. Consider just doing the ACF. These are duly licensed depository institutions in the United States. If we were to create the ACF but to say that no duly licensed DI in the United States with a foreign parent could participate, that's a huge change in our national treatment policy. That's enormous. So without a decision to really change the way we approach licensed entities in the

United States, we don't have a way of distinguishing foreign parent organizations from domestically licensed DIs.

MR. ROSENGREN. But we would know whether they have access to an ACF facility in Europe or an ACF facility here, and it would seem as though saying that you have access to an ACF facility somewhere would not exclude, say, the Canadians or the Japanese but would exclude the Europeans if they were participating in the same program.

MS. JOHNSON. I'll leave that to the lawyers to decide. But I am suggesting that by creating a swap, the staff had a presumption that the Europeans could work with the ECB and a certain hope, if nothing else, that they would work with the ECB. Otherwise, with no swap, we have basically put them back in the position that they are getting this directly from us.

MR. DUDLEY. If I could just make two points. One reason that you might want to let them borrow in both places is that their collateral may be in both places, and they may have different availability of collateral in the two locations. The second reason is that your goal at the end of the day is to get the money to those who most need it. To the extent that you put constraints on the system, you are going to make it more difficult for the money to get to the people who value it the most.

MR. ROSENGREN. We make that distinction already in the discount window with primary and secondary. So if you are at a CAMEL rating of 4 or 5, we normally would not allow you to borrow as a primary credit. If we are taking the discount window as an analogy, yes, we want to give it to the people who need it, but we don't want to give it to the people who need it so much that they are about to fail.

MR. DUDLEY. No, I think we all agree on that. [Laughter]

VICE CHAIRMAN GEITHNER. But I think it's clear in the documentation that to be eligible to bid you have to be eligible to borrow at the primary credit facility.

MS. JOHNSON. Right.

VICE CHAIRMAN GEITHNER. To be eligible to bid in the auction, as it's designed, you have to be eligible to borrow from a Federal Reserve Bank at the primary credit facility. Now, if you are an institution that is migrating across states of the world and ratings in the midst of this four-week program, then we'd face some awkward decision in that context. But I think that Karen's response is right, which is that in general, in the world today, we have a lot of large institutions that are essentially dollar based, that live with a big mismatch between the access to liquidity in the currency where they may need it and the liquidity that the home country central bank is willing to provide. In that context, being open to respond to requests for a swap is a way to help limit the risk you referred to, which is that we don't want to live in a system where, if there's substantial dollar-based liquidity needed at a non-U.S. institution, if the only option that exists is for us to be the ones providing liquidity, then that would not be a terrific situation for us or for the home country central bank and its supervisor, probably because they will be better at making the liquidity-solvency judgment in some sense. You would want them to have the means to actually respond to that need, if they think it's appropriate, without having the entire burden for that come on us. On the other hand, they exist here in the United States as depository institutions. They have a set of not rights but expectations about what they can borrow and what kind of liquidity insurance they can get from us, and we can't change those in the middle of the game.

CHAIRMAN BERNANKE. Governor Mishkin had a question.

MR. MISHKIN. Actually, great minds think alike. The first question you asked was exactly the one I was going to ask.

CHAIRMAN BERNANKE. Okay. President Fisher.

MR. FISHER. I have two questions. The degree to which this new Lombard facility's bidding process would avoid the stigma issue is unclear. Could you repeat to me how this deals with the stigma issue? That's my first question, and then I have another one after this.

MR. MADIGAN. Well, partly by auctioning credit, so institutions are coming to the Federal Reserve voluntarily and paying a price that is market based. Another point is that the institutions are regarded as generally sound. They have to meet a certain qualification standard to get to the discount window, and we would be taking certain steps in terms of our reports to try to distinguish this from other discount window credit. Now, that said, I think we have to admit that we're not sure the degree to which this would deal with the stigma issue.

MR. FISHER. I mean, aren't they still saying that they are distressed?

MR. DUDLEY. No. No, the economics are better because you have to think about the minimum rate. The minimum rate is the swap rate plus 10 basis points, which is well below one-month LIBOR and well below the one-month term fed funds rate. So there is that room in-between. You could actually criticize a bank for not participating in this. They are somehow leaving money on the table by not taking advantage of this.

MR. FISHER. I'm sure the small banks will. That's what I mean. That's why they're not going to like it. In other words, this is a big institutional facility.

MR. DUDLEY. Not necessarily.

MR. MISHKIN. Just as long as you need 50 million bucks.

MR. FISHER. Well, you have to have \$63 million, if you're using the ratios you're using, in collateral. So there is that aspect. I understand that's what it was meant to address.

My second question derives from the first, and that is, could you give us a little background on the staff's discussion on having tighter standards? I gather there was some discussion of that in terms of coming to the ACF and being well capitalized but also well managed. Why the distinction, and what is the state of play of that argument as opposed to the regular requirements for going to the discount window?

MR. ALVAREZ. We did consider imposing a higher standard, something like "well capitalized and well managed"—the financial holding company type standards—and two concerns were raised. One is that it has the same problem that President Rosengren referred to that we have to rely on the exam rating and the capital adequacy determination by another regulator. We don't get out of that problem by raising the standards, and most of the institutions that were referred to actually fit into the higher standard. So it didn't achieve very much. The second thing is that there was some concern that it might have a blackballing effect. For folks that were between the standard for primary credit and the higher standard that we were setting, it might indicate that the Federal Reserve felt those folks were weaker. Those may in fact be people we want to get some funding to. They're the ones that seem to be struggling with liquidity, and this might make their problems worse because the market will perceive that the Fed wouldn't even be willing to lend to them under the facility.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. Other questions? President Hoenig.

MR. HOENIG. Just kind of on this point. There is a description of this as somewhat prequalifying. You have to be available for primary credit. Second, it's temporary. Third, it's

in pretty rough times as far as when you're borrowing. I'm not sure you're going to get rid of the stigma problem with this, and you're going to go through a lot of gyrations to do something that then you're going to have to unravel. Are you sure that you want to do this? [Laughter] If I were introducing this, I think I'd be more inclined to introduce it in good times, so that you get a perspective going that is less subject to wide interpretation. That's a little concern I have as much as anything.

CHAIRMAN BERNANKE. Any other questions before we take general comments?

Governor Kroszner.

MR. KROSZNER. Quickly, as a follow-up to that—if you are successful in getting rid of the stigma problem, then does the discount window effectively disappear?

MR. DUDLEY. No.

MR. KROSZNER. But there might be pressure for it to disappear because this certainly would be more desirable than the discount window. It's cheaper, and there's no stigma.

MR. DUDLEY. But this is a temporary program.

MR. KROSZNER. Deposit insurance, I'll remind you, in 1933 was temporary.

MS. KRIEGER. But when you have that inadvertent overnight overdraft that you are facing, you can't wait until the weekly auction.

MR. KROSZNER. Okay. Well done.

VICE CHAIRMAN GEITHNER. You are capping the amount in a way that you could not reasonably decide you're going to cap total access to the discount window.

MR. MADIGAN. Of course, this wouldn't substitute at all for secondary credit, by construction.

CHAIRMAN BERNANKE. Governor Kohn.

MR. KOHN. In my thinking about the stigma point, the time line is an important part of that. If you have to submit your bid on Monday to get awarded on Thursday, this is not the action of a bank that's desperate for funding. I think the stigma comes because, at the discount window, apart from bidding strongly at the end of the day and then ending up paying this penalty rate, you don't have anywhere else to go. So it seems to me this auction facility looks much more like a liability-management facility than it does a facility for banks that absolutely have to get funds, given that there's a three-day or four-day wait until you get them.

CHAIRMAN BERNANKE. Okay. Why don't we start our go-round? President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I've been thinking a lot about this since I heard about it last week. I want to start by complimenting the staff at New York and the Board who wrote the summary memo. I think it does a very good and balanced job of articulating the costs and benefits of this proposed facility. I was going to say that they undoubtedly did it in a compressed timeframe, but then I heard you guys have been working on it for weeks. [Laughter] But in any event, my hat is off to them.

I very much agree with the staff that weighing the costs and benefits to reach an assessment about the desirability of this is inherently a difficult judgment. For me the critical question concerns the normative implications of what we're seeing in the marketplace for term funding and the normative implications of this proposed intervention. Banks that are borrowing at term now are paying up for insurance against the eventuality that their funding costs rise—for example, because of a deterioration in their perceived creditworthiness. Banks that have viewed themselves as more at risk are naturally willing to pay more for such insurance, and some reports suggest, as Mr. Dudley did this morning, the presence of an adverse-selection problem in the sense that borrowing at term reveals oneself to be a borrower of high risk, and so only high-risk borrowers are willing to

pay more. Banks that are reluctant to lend at term are placing a high value on being able to use their liquidity to accommodate assets that may come on their balance sheet soon. We had a lot of discussion about this in the morning. Balance sheet capacity appears genuinely to be a scarce valuable commodity these days. That's consistent with the notion that raising bank capital is expensive in the current environment. I think the adverse-selection story is worth considering seriously in this context because it's the interpretation of what we're seeing that provides the best hope for this being an intervention that improves market functioning in the microeconomic sense of the term.

But if adverse selection is what has impaired the functioning of the term market in this normative sense, then there must be lower-risk banks that are unwilling to borrow at the same high rates as high-risk banks but that are rationed because they're unable to distinguish themselves from high-risk banks. Now, if this is the case, the only way to improve market efficiency by lending is to lend more than the current volume of term lending because otherwise we're just going to lend it to the current term-lending borrowers and none of these rationed-out, lower-risk banks are going to get access to it. In other words, if we do lend through an auction facility to draw in disadvantaged borrowers to try to reach them with credit, we can do so only by subsidizing the high-risk borrowers as well. Now, I'll mention that, from the discussion this morning, my understanding is that we have very little idea what the volume of that term lending is. So I don't see how we chose this number and how we can be confident that it's going to do this and reach through the high-risk borrowers to pick up the low-risk borrowers.

More broadly, I'm not sure I see how this facility could improve the normative functioning in the market. We're going to auction off only the same contracts that market participants are capable of offering now, only we're also going to subject ourselves to the additional constraints



imposed by our single-price auction format. So we're not improving on any contract out there. The only unique attribute we would appear to bring is our ability to subsidize lending terms. We could conceivably improve market functioning if adverse selection is the right story here by doing something that market participants are incapable of doing, and that would be compelling borrowing by everybody or by a set of people to achieve a superior pooling allocation. But I don't think we want to do that. Or we could conceivably improve market functioning by acting on information that's superior to that of market participants—a knowledge of the creditworthiness of institutions, for example. But it isn't clear that this is a key part of the proposal either, because institutions have to be rated 3 or above to get access and I think virtually all the currently affected institutions in these sorts of high-risk and low-risk categories are in the 3 or above categories already. A related point here is that, if we really think information constraints are at the heart of the problem, it might be better to address this problem by addressing those constraints directly by using our supervisory authority to encourage and facilitate greater transparency. So my sense is that this facility would just subsidize borrowing banks without doing anything to mitigate underlying informational asymmetries or any other type of market friction that I can think of. That means to me that this proposal raises the usual moral hazard concerns. The staff memo was very clear and articulate about those. I think there's a danger with this facility of raising expectations that, in the future, significant increases in interbank funding spreads are going to be ameliorated by central bank intervention. If we raise that expectation, we're going to undermine to some extent market mechanisms for assessing the relative risk of institutions.

I'm a little worried that if this does not produce a demonstrable effect on relevant market conditions, it could erode confidence in us, and I feel so especially in light of our previous change in discount window policy, which I think is widely viewed as having had little substantive effect so

far. I think that's the view out there. I also worry that this could complicate the resolution of failing institutions whose condition, as Vice Chairman Geithner suggested, deteriorates while they're borrowing from this auction facility. It would put us in a very awkward place. As Governor Kohn said, this isn't like a one-day emergency kind of thing—it takes some time. But some institutions in questionable situations, some problem institutions, look for term funding and are willing to wait four days to get it and know enough about their condition to line it up ahead of time. I worry about this sounding like a cloak for the ECB, for us to give money to the ECB, and I worry about President Rosengren's issues as well, and I'd be more comfortable with the swap line than I am with the domestic facility. If those foreign authorities want to extend credit and have the knowledge and capacity to do so, and it's on their dime and they're bearing the credit risk and they want to borrow the dollars from us, I see that as a reasonable step for a central bank to take. I also worry about valuing collateral. I don't think that our mechanisms for doing that are robust and strong, especially in the current environment with at least standard haircuts.

Now, I can appreciate the broader problem articulated by the staff and others that banks that are constrained in the term funding market might tighten borrowing terms for consumers and businesses and that might have real economic consequences. But if that's the problem, I think it would be better for us to just cut the funds rate rather than alter the relative funding costs of different banks. This is essentially what we did today. We cut the funds rate to offset the macroeconomic effects of higher credit spreads.

Just a final set of comments. More broadly, I've been hoping for some time that banking policy in our country was moving slowly but surely toward greater reliance on market discipline and away from forbearance and subsidization. I've been hoping that we as a central bank would gradually move away from things that are tainted with credit allocation. Times like these don't

come around very often—you know, once a decade—and my sense is that the precedent we set here is going to be remembered for a long time and it's going to affect market behavior for a long time to come as well. In my opinion, we ought to look at these episodes of market stress as an opportunity to make some reputational progress on the time-consistency problem that is at the heart of moral hazard. So for me the balance of considerations weighs heavily against this proposal, Mr. Chairman.

CHAIRMAN BERNANKE. Let me echo what you first said and congratulate the staff on an enormous amount of work and a terrific presentation. I do want to just say a word, President Lacker. Most of your arguments are premised on the idea that markets are basically in some kind of equilibrium and we're just messing with the equilibrium. There's a longstanding tradition, both in central banking and in theoretical analysis, that you can have periods when there is insufficient cash in the market and prices are, therefore, driven away from fundamentals by the lack of cash. What central banks do is provide cash against collateral. I refer you, for example, to Franklin Allen and Douglas Gale's new book, *Understanding Financial Crises*, in which they present a model with exactly that property.

The moral hazard issue is the following: There is a good reason to allow some deviation of cash-based valuations from fundamentals because it creates incentives for providing sufficient liquidity and rewards those who have sufficient liquidity. But beyond a certain range, the models as well as central banking experience suggest that, when you have a fire sale type of situation, then the central bank can be useful by providing cash against that collateral. Essentially this process would take \$140 billion of undervalued, hard-to-sell, or illiquid assets onto the central bank's balance sheet and provide term liquid funding in its place, which I find totally consistent with Bagehot and the traditions of central bank lending. Now, the question arises whether the market is in sufficient

distress. If it's not, then we're in the first regime where some deviation of values from fundamentals is legitimate. If the market is in extreme distress, I think—I repeat what I said before—there can be situations in which markets are simply not functioning well and there could be a lot of reasons for that in which case the central bank could help the market function better. I agree that some of these issues about bid size and so on do confuse the issue. We need to make a strong distinction between helping these markets to function better—we can address, for example, some of the counterparty risk because we have all this collateral in our discount windows—and helping or bailing out any individual institution. I agree with you that we certainly want to avoid that perception if at all possible. President Rosengren.

MR. ROSENGREN. I like the idea. I think it does reduce stigma, and it would likely reduce the spread during a time of crisis. I would want it spread out among a larger number of institutions than just five because I do worry about that potential. While I know that in your documentation you highlighted that there wouldn't be a way to identify the institution, my guess is that, given that this is a new facility, there may be congressional hearings, and I wouldn't be surprised, particularly if only five institutions borrowed from it, if we'd have to at least be prepared for the possibility that it would become more public than under normal circumstances.

So in these terms, I think the haircuts that we think about for a twenty-eight-day period are a little different from the haircuts you might take overnight, in which case we're going to have to make sure that we really are collateralized sufficiently so that we're not taking risks, since that is a principle of the discount window. I worry a bit about whether our primary-secondary distinction was designed for this, and we might want to at least rethink exactly how we classify primary versus secondary credits. During times of distress, this would be a way to try to provide liquidity, but it might also be worth at least thinking about some of the potential issues during those times of stress.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Again, I'll echo praise for just the incredible work that the staffs have done—a very clever way to address some specific problems that we're facing. One is the stigma problem, and two, as I mentioned earlier, is the source of the uncertainty. We don't really have the tool to get at that directly; we can get at it only very indirectly. With the 1998 situation, there was another way to get at that. Some people thought it was a good way; some people thought it was a bad way. We won't debate that, but the market perception was that a particular institution was at the heart of a lot of the uncertainty, and if you could resolve that, you could reduce that uncertainty significantly. Also the interventions by the IMF and other organizations dealt with some of the international uncertainties. With the traditional tools that we have, we're somewhat hampered in trying to get at that, so I think this is a very clever way to try to do so. But really my comments echo what President Rosengren has said. When we start to move from doing overnight to doing term funding, we may need to rethink what kind of collateral we have. Obviously, we're now using 80 percent of collateral rather than 100 percent of collateral. That's certainly a step in the right direction.

We need to think about whether we need “well capitalized and well managed.” That creates some challenges in trying to differentiate this from the overnight lending facility, and as Mr. Alvarez said, it raises some issues with respect to singling out institutions that make one hurdle but don't make the other hurdle. But we need to think about it very carefully because the potential challenge both from an optics point of view and a substantive point of view is that, in the short run, we want to help out institutions in certain ways by providing funding but we don't want to be helping out those that have not taken appropriate actions.

In extreme circumstances like those we have now, as the Chairman said, one could certainly say that we're out of equilibrium on pricing a lot of the assets, pricing the collateral, pricing the value, or pricing issuances by certain institutions, and so it is extremely important that this be short term and that those kinds of considerations be brought to the fore and thought through very carefully and have the potential to be altered over time if we don't feel we're having sufficient haircuts. If we do feel that certain institutions may transit from one rating to another within twenty-eight days, we need to be prepared to think about how to respond because it raises questions for a least-cost resolution of institutions that may be going down. But I do think this is an extremely creative approach to try to get at something that we otherwise didn't have easy tools to get at. It may create a longer-term issue of an expectation that this kind of thing will come out again or that there will be another type of clever innovation that will deal with the next market problem so that people don't have to worry about those market problems. But that's a very difficult tradeoff to make. I can support this as addressing the short-term problem, and I think we can largely deal with some of those longer-term issues if we do stick to our guns and make it temporary and if we clearly articulate what we're trying to get at.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. One of the appealing things about it is that it broadens options, and I think that, any time you are in a set of circumstances where you have to find solutions, broadening your options is good. I appreciate the fact that we are not voting on this today because I think it deserves a little further thought, especially about the unintended consequences. There are advantages to saying it is temporary, but I'm not sure that there aren't also some disadvantages from that. There are advantages in trying to remove the stigma, but I'm not sure what other hazards you create because, if you don't pre-qualify, what have you said to the world about that as well. So there are

lots of uncertainties around this that I would appreciate more time to think through before we actually begin to implement it.

CHAIRMAN BERNANKE. Okay. President Poole.

MR. POOLE. The staff did a fine job of designing and explaining. I want to concentrate on the issues that I have. I'm pleased that we're not about to launch it. If we had, one of my concerns is that the United Kingdom is left out, which I assume is by choice, but it might still create a whole lot of issues for the United Kingdom. I'm sure there would be a lot of questions in the market—Why didn't you do it?—or whatever. It might have added pressure there that would not only have complicated the U.K. situation, but it might have ended up complicating our own situation. That might still be an issue if we go this way in the future. I'm concerned that the method of setting the minimum bid rate is not really transparent. As I gather from reading, we'll tell the market the number, but we won't say what the reference rate is. Are we going to announce that it's tied to the overnight swap rate? I had understood that we were not going to.

MS. KRIEGER. We didn't say. It was based on a market rate for term funding.

MR. POOLE. But weren't we going to announce that this overnight index swap—

MS. KRIEGER. No, I don't think that had been the plan.

MR. POOLE. Okay. But then the first time that you change that rate you are going to raise a whole lot of questions—Well, how did you decide how to change it? I'm more worried about the transparency of setting it that way because it is bound to raise questions about where that rate comes from. How did you decide on this one? It might be particularly true if that rate ends up being below the target federal funds rate.

CHAIRMAN BERNANKE. This is news to me, by the way, because the logic of this was that the normal spread between the overnight index swap and term funds is about 10 basis points.

MR. POOLE. Yes, but that depends on the market's expectations of where the funds rate is going to go.

CHAIRMAN BERNANKE. But the OIS captures that—the one-month OIS.

MR. POOLE. I understand that, but that can be different from the current target rate that's in effect right now. That's my point. This rate could be below the current target rate, and that seems to me to create an issue that we are going to have to be prepared to explain, and I'm not so sure that's going to be easy to explain. At any rate, I'll leave that on the table for the moment.

MR. EVANS. Are you saying that the minimum rate is going to be a secret?

MR. FISHER. Well, they'll figure it out.

MR. MISHKIN. Won't they figure it out almost immediately?

MR. STERN. If they're going to figure it out, why don't we tell them?

MS. KRIEGER. The question is whether you identify a particular market rate that you're pegging or whether you say you're looking at market-based rates. I think that's a decision variable of this program.

MR. EVANS. I just didn't realize this was as highly confidential.

MS. KRIEGER. But you have the auction announcement. You must tell the bidders ahead of time what the minimum rate acceptable is.

MR. POOLE. You'll tell them the basis points.

MS. KRIEGER. Yes.

MR. DUDLEY. They should figure out pretty quickly what this rate means.

CHAIRMAN BERNANKE. I would suggest that we not get too involved in this. I think we ought to be as transparent as possible.



MR. POOLE. No, but I just say that I think there's a transparency issue here that might have to be explained. So I'll just leave that on the table to be talked about. There is certainly a risk that this facility will not be—well, maybe this would not be a wrong judgment—available to small banks, and the large banks would be getting access to discount window funds at a rate potentially well below that available to small banks. If this were to become a political controversy with some of those who are less friendly to us in the Congress than others, it would complicate the value of this. I would hate to see us get embroiled in a political controversy over this because we were discriminating against 98 percent of the banks in the Eighth Federal Reserve District as well as some of the other Federal Reserve Districts.

If we were to launch this, if we were voting today, this would create a big issue in terms of our directors because we would be announcing to the directors what discount rate they would have to set under the Federal Reserve Act. So if we are preparing to do this in the future, I think it is very important that we have material prepared and that we take it up with our directors in advance so that they will know what we will be asking of them because this could be a very big problem. We need to make sure that we have the directors on our side and that we have prepared them so that, if we have to do it, they will know what the reasoning is.

Finally, once the dust settles, assuming that we don't need to do this before the markets return to a reasonable normality, I don't see any reason that we couldn't have this well planned and actually run a trial or maybe even have a trial once a year or something like that so that the banks and the markets understand how this works. Then you can pull it out of your pocket if you really need it in crisis circumstances. Everybody would have understood it because you would have actually done it. Thank you.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, a lot of what I have thought about this since I realized we weren't going to do this immediately has been addressed by the previous individuals who have spoken. I'd just like to touch on a few points. First, like everyone else, I want to congratulate the staff for excellent work. It is creative. It's also very well balanced in the way that the pros and the cons are argued. Bagehot and the Lombard facility notwithstanding, it seems to me that, if we proceed down this path, we have to position it so that it's a refinement of what we did in August rather than a confession of failure or insufficiency. That would be point number 1.

Still, President Lacker made some very good points, and part of this gets to what President Poole just mentioned, and that is that some political risk, in addition to the risk of failure, is there and we have to acknowledge that it may not work. I have some concerns about the value of collateral and the automaticity, as it were, in this kind of new facility and our ability to value complicated collateral.

My biggest concerns are the ideas, as President Lacker put it, that we're subsidizing foreign banks without really doing anything to mitigate hazard. I think that roughly translates what he said, which gets me to the point of President Poole's comment. We have to be mindful of the risk of being perceived as (1) helping a limited number of very large money center banks and (2) bailing out the Europeans. Now, we understand that. I don't think the public understands that. If you look at my discount window, there are five banks that could meet these collateral requirements, the \$63 million minimum. Some Districts have less; some Districts have more. Our backbone at the Federal Reserve in terms of our political support is the community banking system. To be sure, we all understand that we have systemic responsibilities, but the idea that we might be facilitating these huge institutions or "bailing out" the Europeans is just a risk I think we need to be aware of, and if we proceed, we're going to have to figure out how to manage that.

I'm not against a swap line, another point that President Lacker made. Usually I would expect President Lacker to be against a swap line, but he's not against the swap line. I'm not against the swap line. It does beg the question of whether we couldn't do a swap line and work with the existing facility but for the fact that we think that the existing facility is insufficient. Again, I would present this, if we proceed, as a refinement.

Mr. Chairman, I would like more time to think about this. I'm grateful that you're giving us more time to think about it, and I, again, would like to consider the governance aspects of it. But those are the questions that I have at this juncture. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. It's a very creative proposal, and I agree basically with the comments that President Rosengren and Governor Kroszner said about it. It's important that the collateral be appropriate and well established, and it's definitely better if we don't have simply a small number of borrowers. It's also important we know that we hit our funds rate target because this is, you know, tied to the effective federal funds rate. So if we're really soft on that, then it's going to be an even better opportunity for everyone. But as I think about it, it seems as though this is an opportunity to narrow the spread to 10 basis points instead of the 50 basis points that we actually have on the discount window, except for the eligibility requirements. So I can support this as a temporary facility, but I'm glad that we're going to have more time to think about it.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. I, too, want to congratulate the staff on a creative proposal. I think I need more time to think about this, but let me offer, just to some degree, speculative remarks. They're speculative because it has been a few years since I've even been around a treasury of a

money center bank, but I do think I have some feel for it. First, looking at it from the market perspective, lengthening the maturity of liabilities and then, in turn, assets is desirable. Clearly, that will assist financial stability, which is our objective here. The sub-objectives are to reduce stigma and to unstick the market from its short-term orientation.

So I try to put myself in the shoes of a bank treasurer thinking about whether or not to use such a facility. The way that large bank treasuries work, or at least worked when I was close to them, is that you have essentially what is called an MCO, or maximum cumulative outflow, schedule, which is a schedule of liability maturities going out for 360 days or more. Today's picture on the margin—that is to say, in the money markets, noncore deposits, the things basically where banks are funding themselves on the margin—spikes very early. It's dramatically early, and then it tails off, and it seems to me that the treasurer would think about this by asking, "What MCO gain do I get from using this?" It is just a matter of days—maybe two or three days, not twenty-eight—because you're just adding it to a mix of liabilities that you already have. The offset of that would be the reaction of the market, the stigma question, as they perceive a bank using this—that is, whether there would be some countervailing reaction. It's probably not insignificant no matter how hard we try that, when you use the lender of last resort as a funding source, you are using the lender of last resort as a funding source. So if I were a treasurer, I would be making a kind of calculation as to whether I was really gaining from an MCO point of view any significant comfort relative to the direction I thought the market was going.

My own hope is that this issue will improve dramatically in the second half of October. This week and next week, I believe, we are going to go through the broker-dealer disclosures, and then in mid-October, we'll get the large bank and other bank disclosures, and the market transparency should improve, it seems to me, reasonably strongly in that period. So it is

conceivable that we'll have different circumstances in the second half of October regarding the market's being so terribly short term at this time. So, again, I am trying to think this through as a treasurer would think it, and I think there are some market dynamic considerations that a treasurer would have to think about, which suggests maybe not using it except in really extreme market circumstances.

CHAIRMAN BERNANKE. Thank you. President Pinalto.

MS. PIANALTO. Thank you, Mr. Chairman. My inclination after reading the memo over the weekend was to be supportive of the proposal. However, given some of the comments that I've heard from my colleagues today, I welcome the additional time to think about some of the concerns, especially some of the issues that President Rosengren raised about only five institutions borrowing. I have some of the same concerns that President Hoenig raised about whether introducing a proposal like this during these times really does address the stigma issue. Then the memo also raises the issue that there is a risk that such a program would exacerbate the moral hazard problem, and I'm concerned about this. But I heard a lot of comments today around this table that, in terms of financial stress, it's critical that we do the right thing and play the appropriate central bank role. So, again, I like other comments that were made earlier. We have a great staff, a skilled staff, which came up with a very creative proposal, and my inclination is to support it. I am pleased that we have the additional time to think about some of these issues so that I can better understand some of the concerns that were raised. Thank you.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. Actually, I do have some sympathy for this proposal. I think it is very creative. But there are a lot more people around this table who know a lot more details about this market, how it works, and how treasurers work than I do, and I will

certainly defer to their judgment. But I have a couple of points that I'd like to make. President Hoenig made the point that really gives me a little pause as I absorb this. What I'm really worried about is the law of unintended consequences, and I don't know what they are right now. Many of you around the table have raised some possibilities that this could exacerbate. I think President Poole's suggestion about creating a tension between large and small banks about who has access to this could prove to be a problem. I also agree that it might be unusual, but it would be troubling if, in fact, we ended up lending money in this facility going below the targeted funds rate, which would be maybe unlikely but would complicate our lives in other dimensions as well.

I also worry a bit as I look at the market—and this probably has more generally to do with provisions of liquidity—that part of the problem here is price discovery. Who has the risk? Where are the risks, how much are they, and how do we price them? I worry a bit, too, about the degree to which providing liquidity shuts down or slows down the price-discovery process, which is something that we really want to get done. I don't know how to answer that question, but it's one that I just sort of struggle with in trying to think about whether we are hampering the process of price discovery, by slowing it down and making it easier for people, or are we moving it along at a faster rate. I don't know the answer to that.

The last point, I think, is more of a policy question. Again, President Hoenig, I think, made it. If we view this as a temporary tool, which I think is fine, it is important that we lay out in our own minds under what circumstances in the future we would decide whether or not to implement this tool and how we decide. What criteria do we have? We need something a little more objective than just whenever we want to. I worry a bit that by failing to do so we will abandon some expectations about how the market will react to this and when they might expect us to use it or not.

Do I know what the consequences of that will be? I don't know. I'm struggling with those kinds of questions, so having a little more time to think through some of these things would be very helpful. Those are my comments. Thank you.

CHAIRMAN BERNANKE. President Stern.

MR. STERN. Thank you, Mr. Chairman. Well, at this time, my bottom line on this proposal is that it's okay, but I'm not altogether enthusiastic. It's okay because I think having another arrow in our quiver is not a bad idea, and so to have done the work and put this forward strikes me as clearly constructive. I'm not enthusiastic because I didn't find the case for it that compelling, and let me elaborate on that a minute. I probably would have thought it more compelling a week or two ago, but the markets seemed to be working a bit better, and I think it's to our advantage to let that unfold, assuming it continues to do so. More broadly, I think there's a question of whether the pricing that we're seeing in the term funding market is something that we really should be addressing. Maybe, given all the concerns and everything else, that pricing is perfectly fine at the moment and will adjust over time to something more normal without any action on our part. If so, that would strike me as preferable. But the real question for me at the end of the day is that it seems as though the ultimate justification for something like this has to be related to our macroeconomic objectives. Do we believe that, say, a malfunctioning in the short-term funding market is going to have significant macroeconomic consequences? Is it going to make the economy behave significantly worse than perhaps the economy otherwise would have behaved? My answer to that is "perhaps," but I don't really have a real conviction about that. So that's why I come out, at the moment anyway, with "Yeah, this could turn out to be useful," but it's hard for me to get really enthusiastic about it.

CHAIRMAN BERNANKE. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I think this is aimed at addressing a serious problem that I'm afraid we're losing sight of a bit. The piling-up of financing in very short term vehicles is an issue for financial stability. Partly this is, yes, the term rates are elevated, and if this were just a risk premium on certain counterparties, I don't think that would be a big deal. But I do feel that there has been a malfunctioning in the markets: As is typical in a financial crisis or panic, people have fled toward liquidity and safety in Treasury bills and overnight lending, and the normal arbitrage that happens across markets just isn't happening. It's great that the markets seem to be getting better, but if they continue to malfunction or if it gets worse again, I think there's a serious problem. The problem is that all these banks are being financed in the one-day to four-day area, and it leaves them open to huge rollover risk and huge liquidity risk. In turn, because they have this risk, they're more reluctant to lend. They're more reluctant to use all that capital that you saw in the chart the other day. So it is having a potential macroeconomic effect, and I completely agree with President Stern. We would do it because there's a macroeconomic effect and because there is a financial stability effect. But I think there is an issue here that we can't shrug off.

I agree that the facility would attract those banks that need it most. That's what auctions do, right? That's why they're designed that way, and I think that's fine. For the most part, with one exception, that's the way it would have the maximum effect of relieving some of these issues. You bring in the folks who need it the most, and it relieves some of their problems. That is a problem regarding the borderline institutions that people have been talking about, and if an institution is in transition from being sound to being not sound, this is an issue. It's an issue for two reasons. One is that it could facilitate the runoff of uninsured liability holders, and the Congress has told us not to do that, and we shouldn't do it. That's a moral hazard problem. The second is that it might allow the banks that aren't being run well to make that last bet—to do some other things that would put



them at greater risk. But I think those would be very, very rare institutions that are in that kind of spot where they're just placing the final bet before going out of business. So the borderline institution is a bit of a problem, but I'm not sure it's as big a problem as others have said.

I think this would have a chance of success. There are no guarantees. I absolute agree. When arbitrage isn't working, you have very strong preferred habitats. People want to lend short, and other people want to borrow long, and the Fed would be stepping into that breach in some sense where the markets aren't working. We would be supplying Treasury bills and, to a certain extent, doing matched sale-purchases or reverse RPs or whatever they call them these days, borrowing from the public at the very short term, and we would be extending the term credit. In a sense, we would be stepping in for the arbitrage that's not happening, and that would relieve pressures on these markets at least a little. It has a chance of having some second-round effects of helping those banks that want to use their capital do so more than they are already. So no guarantees. I don't know that it would remove the stigma. As I said, I think the auction process, making it a totally separate discount window, and having the long period over which it has to happen makes it look very, very different from a discount rate loan.

On the moral hazard issue, of course, this isn't doing anything really to relieve people who made subprime loans. It's not going to change the price of those assets, so it's not really affecting that in any moral hazard way. It's not aimed at individual institutions. It's more like open market operations than it is like the old form of discount window lending. Even when normal functioning is restored to markets, banks will be paying for the liquidity insurance that they wrote. There's no relief on the credit side. They'll still have to tie up capital, making good on the liquidity insurance, forgoing more-profitable opportunities. It would reduce, perhaps at least a little around the edges, the extra cost of financing this liquidity insurance that they sold that comes from the disruption of

the markets, from the fire sale aspect. I think that, if we thought that the markets weren't improving and it would have a feedback effect on financial stability, stepping in would be worthwhile. That's the classic central bank thing to do—to step in and relieve some of the extra panicky pressures on the markets to get them functioning again. So I guess I don't see an important moral hazard issue or, to the extent that there is a moral hazard issue, I think it would be more than offset by the benefits to the macroeconomy of the functioning of financial markets, should we decide that this were needed if those markets weren't working. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Very briefly, when I think back about a week ago to maybe one of the darker days that we've had in the past six weeks, there were so many more institutions that were funding themselves on an overnight basis that it wouldn't take much imagination for us to get very fearful very soon if there were some kind of shock that made it impossible or much more difficult for them to fund themselves twenty-four hours later. So I think the ACF would have held great promise then to be useful in addressing some of the headline risks that could very quickly have had systemic implications. I think the ACF holds great promise now.

I'll highlight only one question, which is timing. I share the view put forth by President Stern that, to the extent we see these markets improving on their own terms, which is something we've seen in recent trading days, we wouldn't want to do anything to stop that momentum. If we had hit the button today, it may well be that they would have had to take stock of this new instrument and compare it to the other alternatives they have, and that improvement could have potentially been delayed. On the other hand, if we wait until these markets deteriorate to where they were a week ago, the efficacy of hitting the button then would also be less than ideal. So my own sense on timing—and it's something that the Chairman will, I think, brief us all on if we get to that

point—is to the extent that we see that momentum has stopped and we see the ground weakening below us, then we might have to make a risk-adjusted call at that point. I don't think it will be a very easy or a very apparent one. But on balance, I think that the macroeconomic possibilities are pretty scary, which makes me suggest that we would lean forward on this. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I also want to congratulate the staff. This is a very clever and targeted intervention, and it's a very nicely put together proposal. I'm supportive. I think it's something that's good to have available. I'm glad that we're not planning to put it in place instantly. It does have the potential to address the stigma issues that banks have coming to the discount window. Really, the spike in the spread between term and overnight loans in the interbank market has been quite sizable, and it's obvious that that has been complicating the difficulties that banks have had in managing liquidity.

I have also been concerned, given how many other borrowing rates are linked to LIBOR, that if the spread remains elevated, it has the potential to spill over into the rates that a lot of borrowers pay. I think this has a chance in succeeding and reducing that spread and bringing LIBOR down, but it's not 100 percent obvious to me that it will succeed. I think it does depend on your interpretation of exactly what that spread represents, whether it's credit risk or liquidity risk.

As I read the proposal, I thought it really didn't make the case in a powerful way to me that the inability of banks to fund at term was creating systemic risk. It seems to me that, given a proposal of this magnitude that involves coordinating central bank intervention and has a chance of not succeeding, we ought to be doing it to address something that we regard as an important systemic risk. The comments that Governors Kohn and Warsh made have convinced me, as we

have discussed this, that there could very well be systemic risks here and that we might, if things get worse again, want to put this into place. So I found that discussion very useful. It seemed to me that the case that was actually made in the document in a sense was more a monetary policy case that banks facing these funding pressures would likely raise rates and that would have macroeconomic consequences. That then suggests to me, Well, why don't we use the federal funds rate more? It is a more general tool to remove those pressures.

I share the concern that we will be perceived as bailing out a small set of weak institutions, including Washington Mutual, Countrywide, and others that may be associated with the crisis. Especially if we're using this overnight index swap rate. It has been sitting here, I guess, around 4.80, 4.76, or something like that, which if we had had this facility in effect would be below the funds rate and would raise questions about why we were lending so cheaply. One way or another, I would certainly be happy to approve a swap agreement with the European Central Bank and the Swiss National Bank to provide them with dollar funding whether we go ahead or not, if that's desirable.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.

MR. MISHKIN. I think that this proposal has an important advantage in that it is channeling funds to a place where they are most needed, so it has macroeconomic consequences. If you think about it, open market operations are a very blunt tool. Here you are actually able to direct credit to a market that isn't working. We have a LIBOR market that really is not working; it clearly has spreads that are way out of line. When people talk about what's going on in the market, they basically say, "Yes, there's an arbitrage opportunity, but there's so much risk that I can't take advantage of it." That is something that I think is important. For example, my understanding of commercial real estate deals is that all the deals are done off of LIBOR, and so this actually is an

important market. Do I think this will solve the problem of price discovery in general? No. But I do think that this is an important market that is having important macroeconomic implications, and going in and doing something about it can have very strong benefits.

There are some tricky issues. The issue I really worry about the most is the 20 percent number, where we might have five guys, and everybody knows that some people will be politically problematic for us. So maybe you might want to think about whether that 20 percent number is exactly the best number. That's why I was going to ask the same question that you asked, and now that we have some time, I would encourage the staff to think about exactly that issue.

Another element here is important—which is that we're saying to the marketplace that we're not just thinking about using monetary policy tools; in fact, because it is a credit problem, we're thinking creatively about how to use credit tools as well. In that regard, there's an advantage that we are thinking outside the box and trying to deal with this another way. Let me give you an analogy to something that we did on August 17. On August 17 we pulled out the discount window. We did it with a 50 basis point penalty. You know, you look at it, and in one sense it was not a success. It didn't make a big difference in terms of the numbers. It wasn't bad, but I'll tell you, when you asked people out there whether it was a positive thing to do, they'd say, "Oh, yeah." It really sent a very, very good signal. My sense is that this may not completely solve the problem—there are some issues about how much should be taken up—but I think that it would send a signal that we're on the ball. It has another element, which I'm a bit sensitive to, that there is criticism that we are too academic here because some of us have worn tweed coats. [Laughter] So that you know, the Chairman used to come to the New York Fed meetings and would wear those patches on the outside of his coat. I actually like that look and have my assistant professor corduroy suit. But here we are trying to think very practically in a creative way. It also has an advantage for this

institution at this juncture because we are thinking about market issues and dealing with very specific details in the markets. I think that's something that we've gotten across to some extent. We're ready, and I think this would help. So I'm not saying absolutely that we definitely should use this, but I think Governor Warsh talked about this exactly right. If we're seeing that there's some stalling, that these spreads are not improving, then this is an option that will have benefits. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN GEITHNER. Just a few quick things. First, I should say that the concerns and questions you all put on the table are the right set of concerns and questions. Some of them can be resolved by tweaking the design of things, but some of them we will not be able to resolve with changes in design, and we'll have to decide whether or not we want to live with those things. I think it's important to recognize that, even though we've had ten days of pretty steady improvement in the willingness and ability of financiers to differentiate across different sets of institutions and different sets of instruments, et cetera, and the process is encouraging, we should not take too much comfort from that yet. This process could go on for some time, we are still in a quite fragile situation, and the situation could get more fragile again easily and quite quickly. We may need at that point to escalate in terms of the range of things that we're prepared to do in that context. We need to be very open to thinking about practical, creative ways to address some of the limitations not just in our tools and the relative stigma attached to them but in the tools of the other central banks in the major financial centers. We now exist with a very complicated set of limitations and asymmetries in those limitations, and I think that mix together does not leave us optimally positioned or with the flexibility to deal with the kinds of things we're facing in these markets. So it's going to require that we be open, practical, and creative in thinking through the

optimal way to navigate through those kinds of things. It would be very hard to know outside the circumstance what hierarchy of choices is going to look most appealing to us—whether in the event the swap alone would be ideal or feasible, whether something at the discount window alone would be ideal or feasible, or some other things would be. It's just hard to know.

But I think you have to recognize that we're all going to be in a world of second, third, or fourth best just because nothing looks terrific now relative to those problems. We are not going to be able to clarify for ourselves fully what the effect might be and whether we can manage some of the risk of unintended consequences, not just in terms of future incentives but also in terms of signaling effect. I'm sure we all know that. But some of the things that you raise today we would face in the moment and would not be able to resolve definitively. It is also true that we may need to move very quickly. We may not have a lot of time, and we may need to do something multilateral just because, even though this has a lot of manifestations in dollar funding markets, it's not solely a dollar issue and it's obviously not solely and maybe not even principally a funding issue around U.S. financial institutions. So we may need to be open to doing something together. That will, of course, mean we may need to compromise in terms of what may be optimal for our optics or for our design of the economics of the thing. So I think those of you who welcomed the fact that you would have more time to think through this shouldn't take too much time. This may be a situation in which you will have to resolve your ambivalence quickly. You may not be able to resolve it.

CHAIRMAN BERNANKE. So thank you very much. I appreciated this discussion a great deal. I did not hear a great deal of opposition to the principle that the Federal Reserve at times should help markets function when they are in a state of panic or otherwise in serious dysfunction. So in that respect, I think that this is the kind of tool that under some circumstances might prove quite useful. You did raise a large number of practical issues, political issues, optical issues, and so

on. You all said that you wanted to think about it, and I'm going to take you up on that. Please think about it. Please consult with your staffs, and then let me to please ask our staffs in New York and Washington to see if some of these issues can be addressed, and let us continue to think about under what circumstances this might be useful. You know, just because you have a hammer doesn't mean that every problem is a nail, right? [Laughter] So we do need to think further about the circumstances under which this kind of intervention would improve market functioning and reduce financial stress in an appropriate way. Fortunately, it does not appear that we need to act today. But as Vice Chairman Geithner points out, markets are fragile and the possibility that we might come back to you in three days or a week or two weeks or whatever should not be discounted. So thank you very much for your comments.

The next meeting is October 30 and 31, a two-day meeting, and we will also have Cathy Minehan's farewell lunch at that meeting. Thank you again. The meeting is adjourned.

END OF MEETING