

**Meeting of the Federal Open Market Committee on  
August 5, 2008**

A meeting of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington, D.C., on Tuesday, August 5, 2008, at 8:30 a.m. Those present were the following:

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

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

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

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

Messrs. Connors, English, Kamin, Sniderman, and Wilcox, Associate Economists

Mr. Dudley, Manager, System Open Market Account

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

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

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

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

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

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

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

Ms. Wei, Economist, Division of Monetary Affairs, Board of Governors

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

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

Messrs. Fuhrer and Judd, Executive Vice Presidents, Federal Reserve Banks of Boston and San Francisco, respectively

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

Messrs. Danzig and Duca, Vice Presidents, Federal Reserve Banks of New York and Dallas, respectively

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

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

Mr. Sill, Economic Advisor, Federal Reserve Bank of Philadelphia

Mr. Del Negro, Officer, Federal Reserve Bank of New York

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CHAIRMAN BERNANKE. Good morning, everybody. Today is the last meeting for our colleague, Governor Mishkin. Rick has attended 16 FOMC meetings as a Committee member and 23 additional meetings, I assume mostly as the research director for New York. We are certainly going to miss your singular interventions—[laughter] as well as your insights and your collegiality. There will be a lunch today in honor of Rick, and we will have a chance then to express our appreciation for your time here and for your contributions.

There are comings and goings. Today is also the first meeting for Governor Duke, whom I was pleased to swear in about 15 minutes ago in my office. [Laughter] It took an unconscionably long time for this qualified person to be confirmed by the U.S. Senate. We are very glad that she had the patience to stick it out and that she is finally here. She brings a great deal to the table, including a lot of experience in banking, which obviously is something of great interest to us these days. So, welcome. We look forward to a long and productive association.

Turning to Desk operations, before Bill begins, a couple of issues were raised in our last videoconference. One had to do with the concern about whether we have a sufficient balance sheet to address liquidity needs going forward. Bill, I believe you are going to talk a bit about that—give an interim report on where we are on balance sheet issues and what we might do in case those constraints start to bind. The second concern that was raised had to do with what we mean by “unusual and exigent” and how we determine whether those conditions are still prevailing. I have asked Brian and the staff to put together a memo giving us some thoughts on that issue, and that will come to you before the next meeting and give us a chance to think about it and, as time permits, discuss it at the next meeting. Without further ado, Bill.

MR. DUDLEY.<sup>1</sup> Thank you, Mr. Chairman. I am going to be referring to the handout in front of you. It seems to be getting thicker at every meeting. Since the June FOMC meeting, financial markets have been characterized by two distinct phases. Until the middle of July, share prices weakened substantially, and credit spreads widened. The financial sector's difficulties were at the forefront as housing-price declines continued to pressure this sector. The IndyMac failure led to uninsured depositors taking losses, and this roiled the regional banking sector. The equity prices of Fannie Mae and Freddie Mac plummeted, and their ongoing viability was called into question. The passage of housing legislation that provided support to the GSEs then led to an improvement in investor sentiment and a modest recovery in share prices. As shown in exhibit 1, financial sector shares led the recovery. However, the overall improvement in the broad market indexes was very modest, both in the United States and abroad (exhibit 2). Moreover, no meaningful improvement was evident in the corporate debt or CDS markets. CDS spreads have not changed much, and spreads of asset-backed securities have begun to widen again (exhibits 3 and 4).

Despite intermeeting news that I would characterize on balance as more bad than good, this news did not trigger the type of risk-reduction spasms by investors that have sporadically plagued financial markets over the past year. Exhibits 5 and 6 compare the correlation of daily asset price changes across a broad array of asset classes in July to the corresponding period in March. The blue boxes denote correlations with absolute values of more than 0.5. As can be seen, asset price movements have become much less correlated.

Although the mood is slightly improved today compared with a few weeks ago, the underlying news, especially from the financial sector, remains quite bleak in most respects. In particular, there is little conviction that financial shares have reached a bottom. This can be seen in the unusually high volatility of financial share prices (exhibit 7) and the positive skew in options prices for financial firms, in which the price of a put has been much higher than an equivalent out-of-the money call (exhibit 8). Financial market participants are paying more to protect the downside than to participate on the upside.

Merrill Lynch's recent experience is reflective of the challenging environment faced by financial firms. Merrill Lynch raised new equity capital and announced that it had sharply reduced its net ABS CDO exposure. Investors were initially pleased that the company had bitten the bullet, and the share price rallied in response. But further consideration tempered the initial enthusiasm—and there are more articles on this in the *Wall Street Journal* today. A closer look revealed some troubling aspects of the transactions. First, Merrill Lynch took an additional \$4.4 billion of CDO write-downs from the June quarter-end valuation date. Merrill Lynch sold CDO exposures with a par value of \$30.6 billion to Lone Star for \$6.7 billion. At quarter-end, these positions had been carried on the books for \$11.1 billion. Second, this transaction resulted in a drop in net CDO exposure of only \$1.7 billion because Merrill Lynch

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

provided 75 percent nonrecourse financing to Lone Star. Merrill Lynch gave away all the upside on these assets in exchange for a payment equal to 6 percent of their par value. Third, Merrill Lynch's equity issuance reportedly resulted in 38 percent dilution to existing shareholders. The dilution was exacerbated by the terms of an earlier share issuance agreement with Temasek, a Singapore sovereign wealth fund. This agreement granted Temasek a "make whole" provision if, within 12 months, common stock was issued at a price below Temasek's \$48 per share investment. This resulted in Merrill Lynch's paying \$2.5 billion to Temasek, which Temasek then rolled into a new \$3.4 billion share investment.

Over the past month, the troubles of Fannie Mae and Freddie Mac have taken center stage. Rising loan delinquencies for prime single-family mortgages caused share prices to plunge. This eroded confidence that the firms would be able to raise new equity capital and raised concerns about the viability of these firms. This, in turn, intensified the downward pressure on share prices. As a result, investors began to lose their enthusiasm for the firms' debt. Investors in short-term discount notes were uninterested in taking on any potential credit risk. As a result, issuance volumes fell, and discount note rates climbed (exhibits 9 and 10). Some investors in the firms' longer-term debt obligations—including some major foreign central banks—became unwilling to add to their long-term agency debt and agency MBS positions, and one or two of the central banks actually cut their positions somewhat. However, longer-term debt spreads did not change much because the loss of central bank demand was offset by buying from U.S. fixed-income asset managers, who believed that the implicit Treasury support of GSE debt was likely to be hardened (exhibit 11). Fannie and Freddie responded by issuing less debt. To husband their liquidity, the two firms have backed away from purchasing agency mortgage-backed securities for their own portfolios. The removal of this bid was one factor that caused the mortgage basis—the spreads between the option-adjusted yield on agency MBS and other benchmark yields, such as Treasuries and interest rate swaps—to widen significantly (exhibit 12).

The Congress responded by enacting housing legislation that included provisions that hardened the implicit government guarantee and, thus, reduced debt rollover risk. The Treasury now has authority to lend the GSEs an unlimited amount of funds, the magnitude being constrained only by the debt-limit ceiling. In response, discount note issuance costs have fallen in the most recent auctions. However, enactment of the legislation has not generated any comparable narrowing in the mortgage basis or resolved the longer-term outlook for the GSEs. The mortgage basis remains wide in part because Fannie Mae and Freddie Mac have few incentives to expand their balance sheets. Although their regulatory capital is still well above minimum levels, these capital standards are under review. Moreover, because further losses are likely in coming quarters, it is unclear how long this excess capital will be available to support portfolio growth. Of course, the two firms could respond by issuing new equity. However, the low level of these companies' share prices makes this option unattractive. To raise sufficient funds to ensure long-term viability would cause massive dilution for existing shareholders. To put this in perspective, the current market capitalization of Freddie Mac is only about \$5 billion. This compares with a

book of business in terms of its portfolio and guaranteed book of \$2.2 trillion. Because the GSEs will likely remain reluctant to expand their balance sheets in the near term, the mortgage basis will probably remain elevated, keeping mortgage rates high. This will intensify the downward pressure on housing activity and prices, which in turn will lead to greater loan delinquencies and losses. The consequence will likely put further pressure on Fannie's and Freddie's capital positions. So what's the bottom line? In my view, the legislation has helped to avert—at least for now—a meltdown in the agency debt and agency MBS markets. But the passage is no panacea for ensuring the viability of Fannie Mae and Freddie Mac or in enabling the two firms to provide significant support to the U.S. housing market.

One consequence of the GSE-related turbulence was a temporary pickup in demand in the most recent schedule 1 TSLF auction, on July 25 (exhibit 13). As term mortgage agency repo spreads widened relative to term Treasury repo rates, the cost of borrowing via the TSLF became more attractive. This illustrates how the TSLF program can act as a shock absorber and reduce volatility in term repo rates. With the exception of the July 25 auction, the TSLF auctions continue to be undersubscribed with relatively stable bid-to-cover ratios.

In contrast to the turbulence evident in the financial sector, the bank term funding markets have been relatively stable since the June FOMC meeting. As shown in exhibits 14 and 15, the spreads of one-month LIBOR and three-month LIBOR to OIS remain elevated in the United States, Europe, and the United Kingdom. However, this masks the fact that forward funding rates appear to have risen significantly. As shown in exhibit 16, the forward three-month LIBOR–OIS spread has risen about 20 basis points over the past three months. This spread is now anticipated to remain elevated at around 50 basis points on a one-to-two-year time horizon, indicating that market participants expect term funding pressures to persist for the foreseeable future. Before the crisis, the spread was about 10 basis points.

The U.S. TAF auctions also show a stable trend. As shown in exhibit 17, the bid-to-cover ratio remains around 1.2 to 1, and the stop-out rate has been quite steady over the past five auctions. In contrast, as shown in exhibit 18, the bid-to-cover ratio for the ECB dollar auction continues to climb. As I noted in an earlier briefing, part of this rise reflects the fact that the ECB auction is noncompetitive. The bids are prorated, and the banks pay the U.S. stop-out rate. Larger bids by European banks in the ECB auction do not affect the interest rate they pay for such funding, and that encourages more-aggressive bidding. Conversations with the ECB staff indicate that they are concerned that the outcome could be a bidding spiral. Individual banks could keep raising the size of their bid submissions to ensure a stable amount of dollar funding. It is possible that these pressures could eventually encourage the ECB to switch to a Swiss National Bank type of multiple-price auction. This would eliminate the incentives to bid more and more aggressively on the part of the European banks. However, such a change probably would result in a higher stop-out rate in the ECB auctions compared with the United States or Switzerland. ECB officials might not be fully comfortable with such an outcome.

Early reactions by primary dealers and depository institutions to the two refinements to our liquidity facilities—the \$50 billion program of options on the TSLF and the introduction of the longer, 84-day, maturity TAF auctions—have been favorable. We recently—last Friday and this Monday—completed an extensive set of interviews with the primary dealer community about the TSLF options program and will be proposing final terms, within the set of parameters approved by the FOMC on July 24, by the end of this week. Of course, we will keep you fully apprised as we go forward on this.

As you know, our liquidity facilities have placed significant demands on the Federal Reserve's balance sheet, as the Chairman mentioned. As the liquidity facilities have been expanded, we have reduced the size of our Treasury portfolio. We do this to drain the reserves added by our liquidity programs. The use of our balance sheet to sterilize these reserve additions has raised questions about whether sufficient capacity is still available to meet prospective demand—especially a large unanticipated rise in PDCF or PCF borrowing. Exhibit 19 illustrates the transformation of the Federal Reserve System's balance sheet over the past year, out of Treasuries into non-Treasury lending. As shown in exhibit 20, the non-Treasury portion consists mainly of \$150 billion of TAF loans, the \$62 billion (in steady state) of foreign exchange swaps executed with the ECB and the SNB, and our \$80 billion 28-day maturity, single-tranche repo program. Although the amount of Treasuries held in the SOMA portfolio still totals \$479 billion, a majority of these securities are encumbered in one way or another. As shown in exhibit 21, from that \$479 billion we need to allocate \$45 billion of Treasuries to collateralize the foreign central bank repo pool, retain \$35 billion of on-the-run Treasury securities to keep available for our traditional Treasury securities lending program, and set aside \$175 billion for the TSLF program and now an additional \$50 billion for the TSLF options program (TOP). When the options program is included, we have about \$174 billion of unencumbered Treasuries available to offset additional PCF and PDCF borrowing or to fund further expansion of our liquidity programs. Obviously, further expansion of our TAF or TSLF auctions or single-tranche repo operations would be at our discretion and, thus, does not pose a meaningful problem in terms of reserve management. We wouldn't expand these programs if we didn't have the ability to conduct offsetting reserve draining operations. However, what would we do if faced with a huge rise in PCF or PDCF borrowing? An inability to drain the reserves added by such lending would cause the federal funds rate to collapse below the target.

Fortunately, we have a number of alternatives that would enable us to offset very large demands for PCF or PDCF borrowing. First, we could sell our remaining unencumbered Treasury holdings or use them to engage in reverse repo operations with the primary dealer community. This could be augmented by the \$35 billion of on-the-run Treasury securities currently set aside for securities lending. Together, these two sources could be used to drain more than \$200 billion of reserves. Second, we have made arrangements with the Treasury so that, if the need arises, the Treasury would issue special Treasury bills into the market on our behalf and take the proceeds

and deposit them at the Federal Reserve. Putting the proceeds of such T-bill sales on the Fed's balance sheet would drain reserves from the banking system. The potential scope here is large. The housing legislation raised the debt limit substantially. There is now about \$1.2 trillion of headroom under the debt limit compared with only about \$400 billion previously. Third, we continue to press for legislation that would accelerate the timing of the Federal Reserve's authority to pay interest on reserves. Being able to pay interest on reserves would put a floor under the federal funds rate. In this case, an inability to drain additional reserves from the banking system would not result in the federal funds rate collapsing toward zero. Finally, we continue to explore the legal and operational feasibility of expanding our balance sheet in other ways. For example, could we engage in reverse repurchase transactions using the collateral obtained from our single-tranche repo and from our TSLF operations?

I wouldn't say I am confident that we can handle any eventuality—after all, the triparty repo system provides trillions of dollars of funding to the primary dealers. In the unlikely event that it all came to us, we wouldn't have the capacity to fully offset it at present. But we could accommodate hundreds of billions of dollars of demand if that proved to be necessary. That said, I want to go on record that any very large unanticipated demand for funding from the Federal Reserve by dealers or depository institutions might take a few days or more to offset by reserve-draining operations. Thus, in such a circumstance, the federal funds rate could temporarily trade below its target.

Turning now to interest rate expectations, monetary policy expectations have reverted back to the very slow path toward tightening that was evident before the April FOMC meeting. As shown in exhibits 22 and 23, the federal funds rate and Eurodollar futures curves have shifted down sharply since the June FOMC meeting. Our current survey of the primary dealers shows an even slower anticipated pace of tightening. As shown in exhibit 24, the average of the dealer forecasts in our most recent survey anticipates no tightening until the second quarter of 2009. But the change in the dealers' forecasts since the June FOMC meeting is more modest than the shift in market expectations (compare exhibits 24 and 25). Looking at the probabilities of different rate outcomes implied by options on federal funds rate futures in exhibits 26 and 27, one sees that there has been a steady trend upward in the probability that the FOMC will keep its policy target rate unchanged at both the August and the September FOMC meetings. Note also that the probability assigned by market participants to further easing is lower than the probability assigned to tightening.

The past month has been marked by a significant decline in commodity prices. As shown in exhibit 28, although the energy complex has led the way down, agriculture and industrial metals prices have also declined significantly. These declines have spurred a large decline in breakeven rates of inflation measured by the spread of nominal Treasury and TIPS yields (exhibit 29). As shown in exhibit 30, longer-term market-based indicators of inflation expectations have increased a bit. Both the Barclays' and the Board staff's measures of five-year, five-year-forward



inflation implied by nominal Treasury versus TIPS yields have drifted upward since the June FOMC meeting. However, both measures remain well below the peaks reached in early March.

There were no foreign operations during this period. I request a vote to ratify the operations conducted by the System Open Market Account since the June FOMC meeting. As always, I am very happy to take any questions.

CHAIRMAN BERNANKE. Thank you very much, Bill. Any questions for Bill?

President Evans.

MR. EVANS. Thank you, Mr. Chairman. Bill, at our recent intermeeting call, I wasn't expecting the characterization of the financial stresses to sort of backtrack to the point that it feels like March. Maybe somebody said it was as scary as March. I have noticed in a lot of our speeches that many have noted that financial conditions have not returned to normal, and I have always kind of wondered what "normal" would be. With hundreds of billions of dollars of losses at major financial institutions, I guess I am wondering whether we can reasonably expect that this distress and adjustment will be alleviated over some reasonably short period of time. We are 12 months in. Isn't this likely to take 12 more months or longer? Financial institutions have a lot to digest. What do you think financial institutions and markets have to do to signal a return to acceptable functionality? What are we looking for, and what changes in fundamentals are likely to occur that would deliver sustainable liquidity improvements?

MR. DUDLEY. Okay. That is a big question. [Laughter]

MR. EVANS. I think this is a good time to revisit our strategy and what we are thinking about accomplishing here. It is my understanding that the Chairman has asked you to look at unusual and exigent circumstances.

MR. DUDLEY. I think the first thing we can say is that market participants expect this to last a long time. The fact that the forward LIBOR–OIS spreads are elevated, looking out a

year or two years, suggests that the market views the balance sheet adjustment process as taking quite a long time. Second, I would say that how long is really going to depend in part on how the macroeconomy evolves. If the macroeconomy evolves in a favorable way, then the losses that will be borne by the financial sector will be discretely smaller, and so you can get through this process sooner. In contrast, if the economy has a bad macroeconomic outcome, then obviously this is going to be a lot worse. We don't really know the answer to that yet. Part of that is also going to be very sensitive to what happens in terms of individual institutions over the next 6 to 12 months because we are putting a tremendous amount of strain on the financial sector. If there is little breakage, then the chance of our getting through relatively quickly, say in 12 months, is pretty high. But if that stress creates failures and systemic contagion because of those failures, then this could last quite a long time. So the answer is that we don't really know yet. I think there is a long way to go. We are about one year in, by my measure. I date this back to August 9, when the ECB did their massive reserve intervention. So I wouldn't want to make a bet on what inning this is, but it is definitely not the ninth inning.

MR. FISHER. Please, no baseball analogies. [Laughter]

MR. EVANS. Thank you.

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. I want to follow up on that a little because it seems to me that, over a year ago now, there was a lot of discussion by various parties that had to do with risk premiums being very low. People were worried that the economy and the financial markets were underpricing risk. Now, all of a sudden, these spreads have increased. If you look at the OIS spread that you referred to, the one-to-two years out, is there a possibility that this is permanent—that in some sense the level of spreads in the pricing of the risk is just now higher

and it is going to stay higher, maybe not as high as the peak but at some higher level? If that is true, then using those spreads as a measure of how distressed the market is could be very misleading. As a consequence, it would seem as though you would want to be asking questions not just about the prices and the spreads but also about volumes in these markets. Maybe, Bill, you can elaborate on what volumes are doing—certainly in the near-term, the overnight, and the one-month interbank funding markets? Are volumes back to their levels even though the spreads are higher? I think we have to be a little careful that, if this really is a permanent shift in risk premiums, looking at these things may be the wrong metric for assessing what is going on. If you have any observations about that, I would like to hear them.

MR. DUDLEY. I think it is a fair point that we shouldn't assume that "normal" is returning to the LIBOR–OIS spreads that applied before August 2007, so we have to look at a broader set of indicators. For example, I think that it would be worthwhile looking at the spread between jumbo mortgage rates and conforming mortgage rates as evidence of the degree of the shadow price of balance sheet capacity. I think that, once financial institutions either raise sufficient capital or stop taking loan-loss provisions or writing down assets so that they have enough capacity to expand their balance sheets, we will be getting to the end of this process.

Another thing I would say to add to the answer I gave earlier to President Evans is that the trajectory of housing in all of this is going to be hugely important. One thing that may signal the next phase, maybe the beginning of the end, is when people really do get a sign that the housing sector is starting to bottom, probably first in activity and then in price. Once that happens, the huge risk premium embedded in some of these mortgage-related assets will then collapse. That means that the mark-to-market losses in a lot of institutions will start to fall. So I think that is going to be a very, very important metric once housing starts to really bottom and

people get some visibility about how much home prices will go down. You know, when the argument is about whether home prices are going to go down 15 percent or 20 percent, that will be a very different argument from the argument now, which is whether home prices are going to go down 15 percent or 30 percent.

MR. PLOSSER. How about volumes?

MR. DUDLEY. I think that the market function has varied, frankly. In the middle of the GSE turmoil, the agency market was basically shut down. With the passage of the legislation, it has improved. Haircuts are still quite elevated. Liquidity is certainly not as good as it was back before this crisis. The cost of funding through the FX swap market is still very elevated relative to LIBOR. I think things are improving, though, in the sense that shocks are not as broadly contagious as they were before. The reason is that people now are pretty cognizant of what the problems are; and so when there are new, bad pieces of information, people aren't quite as shocked, and they don't revise their outlook to the same degree about a whole variety of asset classes. But I think that is why the correlation slide that I showed you in the exhibits showed less of a correlation between different asset classes. We are still getting tremendous amounts of movement in asset prices, but it doesn't seem as though, if something happens in one sector, it necessarily ripples through to other sectors.

CHAIRMAN BERNANKE. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I'm just following up here. I mean, as much as I love exhibits 14, 15, and 16—and I have used a lot of them myself when I talk about the economy—it is not really appropriate to look at these as measures of stress. You could just say that these are the equilibrium prices in an economy that is adjusting to a big shock. You could have a completely flat line here that would indicate stress in markets because these prices

aren't moving around appropriately to the risks that have developed and opened up. So a lot of the concern around the table has been exactly that, when markets freeze up, you can't do any trade at any price; and for that the volume data would seem to be a much better indicator of the kinds of things that we are worried about. I think that this is conditioning a lot of our thinking about the economy—you look at this picture, and you naturally think it has to go back to 10 basis points before the crisis is over. That probably is not going to happen anytime soon and maybe never. Thanks.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. I thought that part of President Evans's question was whether markets are back to normal for a period in which they are adjusting to hundreds of billions of dollars of losses on mortgage loans. So I would be interested in your characterization of how markets are working relative to how well they ought to work in that circumstance.

MR. DUDLEY. I guess we don't have a lot of observations to know what normal is in that environment. I think that the markets are generally doing somewhat better, as I said, relative to the flow of new information. I don't think the information flow has improved, but I think the markets are responding a little better to the bad information. That is how I would characterize it.

MR. LACKER. If I could follow up, the reactions you described sound warranted by the information coming in. The market is digesting information about the location and magnitude of losses and the extent to which housing is going to recover.

MR. DUDLEY. I think the market is reacting pretty appropriately to the information it is seeing, although I would say that the risk premiums are still high in a pretty broad array of assets relative to what one would think would be normal. Haircuts are high, and market liquidity is still

impaired. We are definitely not back to normal market function in a pretty broad array of asset classes.

MR. LACKER. But when you use “normal” in that sentence, you mean a time period without hundreds of millions of dollars of losses that we don’t know quite the magnitude of, right?

MR. DUDLEY. Yes. It is hard to benchmark how markets are supposed to behave in a period with hundreds of billions of dollars of losses—because how many times have we actually gone through this experience?

MR. LACKER. So if I could just follow up—in these graphs, what would you point to as the effects of our actions or our lending?

MR. DUDLEY. The effects of our actions have been to mitigate the rise in term funding pressures and to somewhat mitigate the forced liquidation of collateral because of the inability to obtain funding. Because of that, our actions have helped prevent the kind of pernicious margin spiral that we saw in March, when volatility was going up and haircuts were going up, which was then causing mark-to-market losses, which were causing forced selling. So I think our actions have mitigated those to some degree. Now, obviously, we don’t know what the counterfactual would have been in the absence of our actions, but I believe—and most market participants believe—that our actions have been helpful in those respects.

CHAIRMAN BERNANKE. Thank you. I guess I would comment that there is an asymmetry here, which is the possibility of systemic risk. There are situations in which failures—major collapses of certain markets—can have discontinuous and large effects on the economy. We have seen that in many contexts across a large number of countries. These stresses do reflect the working out of equilibriums given fundamental losses, which we can’t do

very much or anything about. But they do create machinery that is less flexible and less able to respond to new shocks, and that raises systemic risk. That is the risk that we want to try to minimize, even as we allow the markets to work their way through and to price the changes we have seen.

MR. DUDLEY. We have never argued that the role of our facilities is to prevent the adjustment. We have always argued that the role of the facilities is to allow the adjustment to be orderly rather than disorderly. That is what we have been going for.

MR. LACKER. I would be interested in seeing a model, Mr. Chairman. Thank you.

CHAIRMAN BERNANKE. Certainly. Any other questions for Bill? If not, let me turn to David Wilcox for the economic situation.

MR. WILCOX. Thank you, Mr. Chairman. In putting together the economic outlook for the current Greenbook, we confronted three main changes in circumstances relative to the situation as it stood in June. First, the labor market looked distinctly weaker than we had anticipated. In the employment report that was released in early July, payroll employment declined by more in June than we had been expecting, and the unemployment rate held at 5½ percent rather than dropping back as we had anticipated, following the increase of 0.5 percentage point in the previous month. The fraction of the labor force working part time for economic reasons had moved up sharply, and claims for unemployment insurance were trending up. The second major change in circumstance that we confronted was a second-quarter increase in real GDP that apparently continued to outpace our expectations. In last Wednesday's Greenbook, we projected growth at an annual rate of 2.7 percent in the second quarter, 1 percentage point stronger than in the June Greenbook. At that pace, GDP growth would have slightly exceeded our estimate of the rate of growth of potential output. The third major change was a financial sector that looked more hostile to economic activity, on balance, than at the time of the last meeting despite the improvement during the second half of the intermeeting period that Bill Dudley has just described. When we put the Greenbook to bed, the stock market was about 7 percent lower than we had expected as of June, a variety of spreads remained wide or had widened further since the previous Greenbook, and concerns had been heightened about some key institutions. In addition, the latest reading from the Senior Loan Officer Opinion Survey pointed to a remarkably widespread continued tightening of terms and standards for both households and businesses.

These three factors—a weaker labor market, apparently stronger aggregate demand, and a more hostile financial environment—did not easily fit together. To

resolve the situation, we began by ruling in favor of the profile presented by the labor market and heavily discounting the greater vigor being signaled by the spending indicators. In our judgment, the story being told by the labor market seemed by far the more credible one, what with housing prices continuing to decline at a rapid pace, consumer sentiment dropping into sub-basement levels, energy prices remaining high even after their recent partial reversal, loan officers reporting a pervasive tightening of credit terms and standards, and other measures of financial stress flashing at least amber. Moreover, while quarter-to-quarter discrepancies between GDP and IP are commonplace, the nearly 4 percent drop in manufacturing IP during the second quarter fueled our skepticism that the economy was on a fundamentally sound footing.

As you know, for several Greenbooks our GDP projection has been substantially weaker than it would have been if we had kept in line with the advice from our forecasting models. We were motivated to impose this judgmental weakness partly in recognition of the possibility that we might be entering a recession, and recessions are times when spending tends to fall short of the level that would be indicated by the fundamentals. We also were motivated by the restraint that we think financial markets are imposing on real activity and which our models are ill-equipped to capture. In the current projection, we had to modify these assumptions in light of the changed circumstances. In effect, we interpreted the greater-than-expected strength of real GDP during the second quarter as reflecting an error of timing with respect to the judgmental weakness that we had built into the forecast but not a misjudgment about the overall magnitude of that weakness.

Implementing that interpretation involved three steps. First, we responded to the unexpected strength in first-half GDP growth by shifting some judgmental weakness into the second half. Second, we deepened the overall amount of restraint that we imposed in light of the less favorable financial climate. Third, we stretched out the period of financial recuperation: Whereas previously we had financial market conditions essentially returning to normal by the middle of next year, in this projection we have the period of recuperation extending into 2010. These adjustments left our projection for real GDP growth 0.1 percentage point lower over the second half of this year and 0.2 lower next year, despite the offsets from lower oil prices and a slightly greater dose of fiscal stimulus, reflecting the introduction of extended unemployment insurance benefits.

For the most part, the avalanche of information that we received since putting out the Greenbook last Wednesday has corroborated our projection. This year's revision of the national income and product accounts threw us no real curve balls. (Sorry for the baseball analogy.) [Laughter] The growth of real GDP was revised down by an average of 0.2 percentage point per year. The revisions to the PCE price indexes, both core and total, were very slight. While the BEA has given us some homework to do between now and the September meeting in folding these data into our thinking, any adjustments that we might be prompted to make, including to the supply side of our forecast, are likely to be slight.



On the face of it, the advance estimate of real GDP growth in the second quarter of this year seemed to hold a bigger surprise. The BEA's estimate, at 1.9 percent, came in  $\frac{3}{4}$  percentage point below our estimate in the Greenbook. However, as best as we can tell—based on still-incomplete information—the miss was attributable to lower estimates by the BEA of farm inventory investment and of value added in the trading of used motor vehicles. Our preliminary reading is that neither of these errors carries any signal for the forward momentum of the economy moving into the second half of the year. Friday's employment report was likewise mercifully well behaved—at least in the narrow sense of conforming to our expectation. Private payroll employment declined an estimated 76,000 in July; together with small downward revisions to May and June, that left the level of employment in July very close to our forecast. In addition, the unemployment rate came in only a few basis points higher than we had expected.

The only real news since Greenbook publication came from the motor vehicle manufacturers. On Friday, they reported that sales of light vehicles in July were at an annual pace of 12.5 million units, much weaker than our already weak forecast of 13.3 million units. Moreover, they knocked their assembly schedules for the third quarter down from 9.4 million units to 8.9 million units. Taking their schedules on board would slice another  $\frac{1}{2}$  percentage point from our estimate of GDP growth in the third quarter. The manufacturers have already announced increases in incentives, but it remains to be seen how vigorously consumers will respond in the current environment and how great the financial wherewithal of the manufacturers will prove to be to sustain such moves. In any event, the drop in sales and production is certainly large enough to give renewed urgency to the question as to whether a broader retrenchment in spending might be in train.

Turning to the inflation side of the projection, our forecast for core PCE prices over the remainder of this year is nearly unchanged from the June Greenbook. We still have core inflation stepping up from a little more than 2 percent during the first half of this year to a little more than  $2\frac{1}{2}$  percent in the second half, as the surge in prices for imports, energy, and other commodities passes through to retail prices and as some components that saw unusually low readings earlier in the year accelerate to a more normal rate of increase. Next year, with the pressures from import, energy, and commodity prices diminishing and with slack in resource utilization becoming a little greater, we have core inflation dropping back to  $2\frac{1}{4}$  percent. The projection for next year is also the same as in the June Greenbook, as the influences from lower energy prices and slightly greater economic slack are roughly offset by the pass-through of higher import prices.

The more dramatic changes in our inflation outlook came in the noncore pieces. Not surprisingly, the plunge in oil prices since the June meeting caused us to whack our forecast for retail energy price inflation over the second half of this year. For next year, however, we marked up PCE energy price inflation a little, partly because natural gas futures prices have a more positive tilt than they did before and partly

because gasoline margins will still have some recovering to do. At the same time, we have become more pessimistic about the outlook for food price inflation. The CPI for food in June came in at 0.8 percent, much higher than our forecast of 0.3 percent. Because we have mostly been surprised to the upside thus far this year, we decided to move closer to our food price model, which has been calling for larger increases than we were previously willing to write down. The net result, as you saw in the Greenbook, is an outlook with faster food price inflation despite the fact that futures curves for both livestock and crops have moved down since the last meeting. All told, we now have headline PCE inflation running at an average annual pace of 3½ percent over the second half of this year, nearly 1 percentage point slower than in the June Greenbook. For next year, we have marked up total PCE inflation by a few tenths in light of our reassessment of the food price situation and the slightly greater rise in energy prices that we now see next year.

With regard to the risks in the outlook, my sense is that the downside risks to economic activity have increased since the time of the June Greenbook. That view is informed by two main factors: First, while we have factored the more unsettled nature of the financial environment into our baseline outlook, the situation seems more fragile than before, and the implications for real activity of a sharp deterioration in financial conditions could be quite large. The first alternative scenario that we presented in the Greenbook—entitled “severe financial stress”—updates our periodic attempt to assemble an integrated macroeconomic and financial scenario. Second, the deterioration in the motor vehicles sector now, to my eye, more convincingly takes on the profile of what we usually see in the course of a typical recession. During the intermeeting period, we will be on high alert for evidence suggesting that the weakness in vehicle sales is a harbinger of a broader shortfall in consumer spending.

As for inflation, the upside risks have, in my view, diminished somewhat. Again, two factors inform this assessment. First, the downtick in the long-term inflation expectations measured in the Reuters/Michigan survey is somewhat reassuring. Second, the drop in oil prices is a welcome relief from the steady drumbeat of bad news from that sector and suggests a somewhat diminished probability that persistently high topline inflation will be reflected in a more serious erosion of household expectations, with all the adverse implications for monetary policy that would entail. To be sure, even with those favorable developments, upside risks remain. We illustrated one such risk in the scenario entitled “inflationary spiral,” in which we posited an initial shock to inflation expectations of 50 basis points followed by an adverse feedback loop that causes actual and expected inflation to chase each other up nearly 1 percentage point above baseline. Monetary policy eventually brings the process under control but only over a lengthy period of time, partly because the rule that we use in the simulations has policy responding to actual but not to expected inflation. Steve Kamin will now continue our presentation.

MR. KAMIN. For the next couple of weeks, millions of people around the world will be watching the Olympic games in Beijing. For those of us charged with forecasting the global economy, of course, China-watching is a year-round task. But

notably, the most salient developments since your last meeting have arisen outside of China. Chief among them, of course, have been the precipitous fluctuations in the price of oil. When the last FOMC meeting concluded on June 25, the spot price of WTI crude oil was running at \$134 per barrel. It soared to over \$145 by mid-July before plunging to about \$119 as of this morning. The \$26 per barrel drop over a three-week period was the largest on record in nominal dollar terms, although in percent terms, the 18 percent decline we've seen has been exceeded on a couple of occasions in recent years. Notably, many other commodity prices, especially those for natural gas and many food crops, also declined sharply.

It has been heartening, and a welcome change, to see oil prices undershoot rather than overshoot our previous forecast. But it would be premature to pop open the champagne. We've seen several other steep declines in oil prices in recent years that gave way to renewed upward surges, and it remains to be seen whether an important shift in the supply-demand balance has occurred. Saudi Arabia added a total of 400,000 barrels a day to its production of oil in May and June, and there are indications that its production rose in July, too. However, these increases bring total OPEC production up only to their level in early 2006, and the world economy has grown considerably larger since then. Analysts have cited gloomier forecasts of global economic growth, and thus global oil demand, as contributing to the weaker oil prices; but those forecasts have been coming down for the past year with little apparent effect. Although oil consumption in the industrial economies clearly has slowed over the past year, we have yet to see either a concerted buildup in U.S. oil inventories or any indications that oil demand among developing countries is slowing. Therefore, a further lurch upward in oil prices is a distinct possibility. Moreover, with spot and futures prices having first soared and then plunged since your last meeting, the relatively flat path of oil prices that we are projecting is only about \$12 per barrel lower, on balance, than in the previous forecast. In the meantime, indicators of foreign growth have come in a bit weaker than we expected, and inflation readings have been on the high side. These gloomier aspects of the international outlook counterbalance, to some extent, the improved tone of oil and other commodity markets.

Clearly, prospects appear weakest in the advanced economies. Consistent with our earlier forecasts of a sharp deceleration in activity, we estimate that growth in all four of our largest industrial country trading partners—Canada, the euro area, the United Kingdom, and Japan—came in below 1 percent in the second quarter. In the United Kingdom, a sharp contraction in the housing sector appears set to drag the economy into a mild recession in the second half of this year. The remaining major economies should skirt recession but remain quite weak in the near term amid slackening export performance, continued stresses in financial markets, tightening credit standards, and very sharp erosions in business and consumer confidence.

Why are the foreign industrial economies slowing about as much as in the United States, when the subprime crisis originated in this country and the major drag on the U.S. economy is the slump in a nontradables sector, housing? Clearly, part of the

story involves the international financial linkages that have led foreign markets and institutions to share in the stresses and losses induced by the U.S. subprime crisis. Another part of the story involves a common shock—the global boom in oil and food prices—that has cut into real household income and spending around the globe. Third, even as the persistent decline in the dollar since 2002 has buoyed U.S. exports and growth, this has come at the cost of trade performance and economic activity in our trading partners. Finally, the foreign industrial countries have enjoyed little or none of the substantial monetary and fiscal stimulus we've seen in the United States over the past year.

We estimate that growth in the emerging market economies also slowed further in the second quarter, to a pace of roughly 4 percent, where we have it staying for the remainder of the year. Obviously, this is well above the growth rate of roughly 1 percent that we've penciled in for the industrial economies, but it is still below their likely potential rate as many developing countries struggle with softening export demand and rising food and energy prices. Notably, however, even after slowing in the second quarter, estimated Chinese growth powered on at about 10 percent.

By 2009, we see both foreign advanced and emerging market economies accelerating as financial stresses ease, the U.S. economy picks up, and commodity prices stop restraining the growth of real household incomes. This recovery scenario depends crucially on our projection that headline inflation starts moving down within the next quarter or two, so that substantial monetary tightening is not needed. The recent decline in oil and other commodities prices provides some comfort that this scenario will materialize. However, we saw some surprisingly sharp increases in consumer prices in June, bringing 12-month headline inflation to around 4 percent in the euro area and the United Kingdom, 5¼ percent in Mexico, and 6 percent in Brazil. In most of our major trading partners, inflation excluding energy and food prices has remained better contained; and in China, headline inflation has actually moved down from its February peak of 8.7 percent, registering 7.1 percent in June. Even so, until we see several quarters in a row of declines in aggregate measures of inflation, we will not be out of the woods.

So far, the imprint of slowing foreign growth and rising foreign inflation on the U.S. external sector has been limited but not negligible. Turning first to prices, core import price inflation has moved up sharply, from about 3 percent last year to 11 percent in the second quarter; this was the fastest quarterly increase since 1987. Most of this acceleration was concentrated in material-intensive goods, such as food and industrial supplies, and was likely due to rising commodity prices rather than to more-generalized pricing pressures abroad. However, inflation in imported finished goods also increased this year. As we noted in a special box in the Greenbook, prices of imports from China have been moving up briskly as a result of increases in domestic costs and in the value of the renminbi. This step-up in the so-called China price explains less than one-fifth of the overall acceleration of core import prices but about one-third of the run-up in inflation for finished goods imports. Even so,

assuming commodity prices stabilize going forward, we expect changes in overall core import prices to slow quite substantially in coming quarters.

So far, U.S. external sector performance has held up well in spite of the slowing global economy. Net exports added 2¼ percentage points to real GDP growth in the second quarter, the largest quarterly positive contribution since 1980. Admittedly, much of this reflected a 6 percent decline in imports, which were dragged down both by weak U.S. demand and the quirky seasonal pattern in the data on oil imports. Even so, exports expanded at a very healthy 9½ percent, supported both by the depreciation of the dollar and by continued robust demand for commodities. Going forward, we anticipate export growth holding up at a still healthy 7 percent or so, as foreign economic growth picks up right around the time that the boost from previous dollar depreciation starts wearing off. The contribution of net exports to U.S. GDP growth should move down, but this will chiefly reflect a recovery in imports as the U.S. economy picks up. Thank you. David and I will now be happy to address your questions.

CHAIRMAN BERNANKE. Thank you. Questions for our colleagues? President Fisher.

MR. FISHER. David, in terms of the relatively benign outlook for core inflation now and for headline inflation, I'm wondering what your assumptions are about margin compression and for the ability of corporations to pass through price increases. By the way, I found the core revisions somewhat alarming because they're well above 2 percent, but less alarming than what I think I heard you say about headline inflation projections. If my memory is correct, over the past two years there has been a wider spread between core and headline, and part of that has been due to the ability of firms at least to restrain or not to exploit any perceived pricing power. If you're assuming that core will be relatively well behaved over time, some assumptions must be in there about margins and margin management, and I wonder what they are. Then I have a question for Steve on the international side to follow up on that.

MR. WILCOX. By our highly imperfect measure of margins, which we see through the filter of the national income and product accounts, margins at this point are somewhat above the average over the past 30 years, and we have them coming down for the nonfarm business sector. We have them coming down a little, but not very much. So we have some slight erosion in

margins, but they remain above average. In the corporate sector, which is measured a little differently from the overall nonfarm business sector, margins are about average at the moment. So I would not say that a big move in the markup of price over cost is a material driving factor in our inflation outlook.

MR. FISHER. Obviously the implication of this more dire outlook for economic growth is that movement of the top line will be very, very difficult, so again, more pressure comes into the margin side to see that one can satisfy shareholders that things aren't as bad as they might be. That's really the nature of my concern. I don't know if we're surveying or getting a sense as to the pressures that people feel. I'm going to talk about some of that, but you may be doing this more formally than I'm able to do to get a sense of what kinds of pressures are occurring on margins.

On the international side, Mr. Chairman, if I may—Steve, I'm curious about these Chinese inflation numbers. As I understand from the Chinese Ministry of Human Resources, the average wage of urban workers rose 18 percent year over year in the first half of '08, and yet they report an official inflation number that I believe you say is 4 or 5 percent of something. How do you square that corner?

MR. KAMIN. Well, the short answer is that we don't have enough consistent sources of data to square it. But you certainly point to a factor that many people have talked about—the rapidly increasing wages, particularly in those industrial areas on the seaboard that are responsible for most of the manufacturing. It's hard to square the relatively limited data that we have on those wages with movements in overall CPI. But there, too, is a limitation—those CPI numbers that are cited from China are mainly for urban areas, so it's hard to know how comparable those are with the others. As you know, there's also an extremely large food component in the Chinese CPI. So because basically food is probably less labor-intensive than the types of manufacturing in which

most of the workers are working, that's part of the way to square that. In some sense, the food prices aren't reflecting those high wages as much. Then a final wild card is that there are different views on what's happening on both the level of profit margins in China and what they've been doing. A lot of anecdotal reports suggest that profit margins are razor thin and that they are being squeezed. Other analyses, including some of the World Bank's, suggest that those profit margins are still pretty ample. So I think you correctly allude to an important phenomenon—the rising wages because of high demand for workers—but we're still busy sorting out the data to figure out exactly how that maps into prices.

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

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. I have two questions. First, on the Greenbook forecast, one thing that struck me is that there was a fairly large revision in your forecast for nonresidential structures going forward. In fact, after a pretty good showing in the first half of this year, you marked down the second half of this year for that and marked down substantially 2009. In the last Greenbook, you had structures actually growing positively in 2009; now it's minus 4 percent, something like that. Is that driven by something in the model, or is that some adjustment factor that was added in? If so, what was the rationale for that, or why might it be coming out? Why do we have that change? Then I'll follow up with another question.

MR. WILCOX. We don't quite understand why this sector seems to have resembled the cartoon character that keeps running along when we think there shouldn't be any support underneath it. [Laughter] We are staunchly negative about the second half for this sector, and that view is informed by the precipitous drop in the architectural billings index. That's one of the relatively few indicators that gives us any purchase on what's going to happen in this sector. It's a

helpful indicator of spending about six months ahead. We think that financial conditions are pretty tough in this area. We're getting a lot of anecdotal evidence that people are having greater difficulty financing projects than was the case before, and we've seen some uptick in vacancy rates as well. So we think all of those are factors. I guess I would say that we've heard very persistently negative reports from our supervision colleagues as well about what's going on in that area.

MR. PLOSSER. But the change is not just in the second half of this year. You've got a big change for '09, too.

MR. WILCOX. Yes.

MR. PLOSSER. If we think about the phrase that people use—"financial headwinds"—and the credit problems that we see, my interpretation of how the staff has modeled that is on the demand side—of restrained credit limiting demand. But I can also think of the financial sector as having been hit by a very significant productivity shock, if you will, where the production function for intermediation has taken a huge productivity shock to it. So in thinking about a model in which that has happened, you might find yourself thinking about the consequences of that, particularly how that affects the path of potential output over the near term. If you think that type of shock is driving potential output down over the near term, depending on the magnitude of that, it is going to affect your estimates of the gaps and therefore your estimates of inflation and what the economy looks like going forward. So I guess my second question is, Have you thought much about this, or is much of this incorporated in the evolution of your output gaps or your potential output measures, working through that channel? If so, what might be the ramifications for inflation and policy going forward?



MR. REIFSCHNEIDER. I'll take that because we did have a bit of an internal debate on that issue awhile back. In particular, Spencer Dale, who was visiting us from the Bank of England, was basically making exactly the same point you're making and raising that issue.

MR. PLOSSER. So maybe I'm not so kooky after all. [Laughter]

MR. REIFSCHNEIDER. No.

MR. KROSZNER. But we sent him out of the country. [Laughter]

MR. REIFSCHNEIDER. One test is whether in previous periods of financial stress like this, we saw what might be more upward inflation pressure than we otherwise could explain or productivity performance that we had trouble explaining. After looking at the experience during the early 1990s in the headwinds period and trying to think about the likely magnitude of the effects of such a productivity shock coming out of the financial system, we decided that you could see a negative productivity shock of that sort going on but that its effects are overwhelmed by the fallout from its effect on demand. So although there might be some negative productivity shock, on net it turns out to be more of a disinflationary effect. But we also had difficulty seeing it show up in productivity data. That said, that would be extremely hard for us to find. You know, it could be there, and we just couldn't find it.

MR. PLOSSER. So in the way you've modeled this in your forecast, are you thinking of yourselves as modeling that net effect, or do you think of yourselves as modeling and forecasting just one side? Have you made any effort to incorporate both sides of this potential effect? Even though it may be small, the question is how small it is.

MR. REIFSCHNEIDER. We've made no explicit adjustment for that in the potential output assumptions we have going in. Looking back, it was hard to see that there was much, if any, effect, but that's a risk knowing that there could be some productivity effect and it's just hard to find.

MR. PLOSSER. Thank you.

MR. WILCOX. May I just augment my earlier answer? I spoke about the nonresidential building sector. Another factor taking down overall nonresidential spending is that the lower energy price trajectory reduces our expectation for drilling and mining expenditures, which have also fallen.

CHAIRMAN BERNANKE. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. A question for Steve. Could you review your thought process on core import prices and comment on how sensitive our inflation projections are to the assumption of, I believe, moderation in core import prices in 2009?

MR. KAMIN. Sure. As I mentioned, core import price inflation shot up very rapidly to over 10 percent in the second quarter, and our approach toward modeling and predicting core import price inflation focuses on three main sources of increase. First are increases in foreign cost pressures, which we proxy by CPIs, which have not been a particularly important driver of core import prices as of late, though they are not negligible. Then the other two, which are more important, are declines in the dollar, which push up our prices, and finally increases in commodity prices because a lot of our imports, even core imports, which exclude oil and high-tech products, still have a lot of commodity input into them. For the past few years, our experience has been that the pass-through of declines in the dollar into core import prices has been relatively moderate. It has definitely contributed materially to the increase in core import prices but not as much, we feel, as the run-up in commodity prices, which has had a pretty substantial effect. One way that we can sort of confirm that impression is that we know that the prices of imported material-intensive products that have the most commodity input have gone up much more rapidly than prices of finished goods, and that has been true over the past year as well. So for all of those reasons, we feel

that commodity prices have been the prime impetus for the run-up in core import price inflation. Going forward, we take our guidance from the futures markets, which indicate that oil prices and other commodity prices will flatten out. As a result, we anticipate that, relatively shortly, core import price inflation also should start to decline. At the same time, our anticipation is that, compared with the past few years, the dollar will fall less rapidly going forward than in the past, and that should be another factor supporting our view that core import price inflation should diminish.

CHAIRMAN BERNANKE. Steve, you might want to define “core import price inflation.” It’s not analogous to the other core.

MR. KAMIN. Right. So, yes, thank you. In the case of core imports, we exclude oil, which is very important, as well as computers and semiconductors.

CHAIRMAN BERNANKE. Vice Chairman.

VICE CHAIRMAN GEITHNER. I have a question similar to President Plosser’s. Both the financial shock—the housing adjustment—and the big relative price shock you could say all in different forms could hurt the rate of growth of the economy’s productive potential. You could say that they all might, in some dimension, reduce the near-term expected path of potential growth. I guess my question is that you have this “costly sectoral reallocation” alternative scenario—do you attribute any effect on potential growth over the forecast period in your baseline to the combined effect of the housing adjustment and the big relative price shock from energy?

MR. WILCOX. No. One of the facts that we learn from microeconomic data about, for example, job flows is that there is always a huge, astonishing amount of churn—job destruction and job creation—just astonishing; and that’s true even in normal macroeconomic times. So the background radiation level is not zero. But we haven’t incorporated in our baseline any allowance for greater cost, and that’s what this alternative scenario was intended to illustrate, making a pretty

generous allowance for the potential effect of that sectoral reallocation on the productive capacity of the economy. But it's a serious question.

MR. REIFSCHNEIDER. There's one minor qualification to what David just said. We do keep track of rough estimates of what we think that the rise in energy prices over the past few years is possibly doing to trend productivity, and we've come up with estimates that maybe it's 0.1. We think that effect has been ongoing, and it is built into the data. In some sense it's occurring, and so in some sense it's in our trend estimates. It is not as though our trends aren't implicitly taking in the fact that there's an ongoing loss in productivity associated with rising energy prices.

VICE CHAIRMAN GEITHNER. I was just going to say that I thought the interesting thing about that scenario was that it doesn't really change your view about the appropriate path of monetary policy going forward. It's basically at the baseline. So even if you were to build in a material change in potential growth, because of the effects on demand going forward it doesn't affect your view about the appropriate path of policy.

MR. WILCOX. The reason is that it operates like a classic supply shock, which presents monetary policy with just simply a less pleasant policy menu to choose from; and in the context of that costly sectoral reallocation, the economy is running closer to its productive capacity. Let's see. I lost my train of thought here.

MR. REIFSCHNEIDER. Well, basically you can just stop there. [Laughter] It's the tradeoff between the two. Obviously, if you were more concerned about inflation outcomes than real activity outcomes, you might tilt it a different way.

CHAIRMAN BERNANKE. Isn't it true, though, that changes in potential growth also have demand effects as well—to some extent offsetting?

MR. REIFSCHNEIDER. Yes.

VICE CHAIRMAN GEITHNER. Yes. It means that it's another way of saying that you wouldn't expect the estimates of the now-prevailing equilibrium real fed funds rate to be higher. Not to stretch this too far, but another way of saying why the likely expected path or the appropriate path of policy doesn't change in terms of the nominal fed funds rate is that we have these offsetting effects on demand.

MR. REIFSCHNEIDER. Yes.

CHAIRMAN BERNANKE. President Evans.

MR. EVANS. Thank you, Mr. Chairman. Regarding a comment that Bill Dudley made about housing prices, for financial institutions, it's going to matter a lot whether we're looking at a decline from 15 percent to 20 percent or from 15 percent to 30 percent. Housing inventories, unsold homes, are very high, and I guess I'm wondering again—we have gone over this a few times—what factors are likely to get housing advancing if it's not a sharp decline in housing prices? I'm having a hard time understanding why the expectation would not be for a relatively sharp decline. I'm translating the Greenbook/OFHEO numbers to Bill's numbers, and I'm not sure, but it seems to me that financial institutions ought to be thinking that a significant adjustment must still be in train if we're not expecting demand to pick up all of a sudden. The mortgage origination challenges are there. Or is this disequilibrium just going to sit there for an extended period of time?

MR. WILCOX. I guess I would push back on the premise that we don't have a pretty significant adjustment in house prices built into our baseline. We have house prices as measured by OFHEO declining 7 percent this year and another 5 percent in 2009, and I wouldn't anticipate any rebound in 2010. You know, our ability to measure where that would leave house prices relative to some notion of fair valuation is incredibly imprecise. But one regression-based indicator that we follow suggests that it would have house prices relative to rents swinging from a relatively high

valuation to a noticeably low valuation. Charles Fleischman illustrated this yesterday in his pre-FOMC briefing. The major factor that provides some reason for optimism is that construction starts are now low enough that builders are making progress in chipping away their inventory of unsold homes. The months' supply figures remain extraordinarily high because the denominator is very low; but in terms of units of unsold homes, my recollection is that we've chipped away about half the run-up in terms of absolute number of units in inventory. We also have starts continuing to come down materially from their current level. So we think that the process will begin to get inventories into a more normal alignment.

MR. EVANS. The staff has been way out front in projecting the housing decline, and that has been very helpful. Is there any dissonance between what Bill said and your pretty substantial expectation of housing-price declines?

MR. WILCOX. I don't think so.

MR. EVANS. Was it 15 to 20 or 15 to 30?

MR. DUDLEY. I think what makes it complicated, though, is that there's a nonlinearity. If the housing-price declines do turn out to be on the higher side, it then puts more stress on the financial system and on credit availability, which then leads to a weaker economy, which then puts more stress on the housing sector. So small differences in the path get amplified.

MR. EVANS. I agree with that chain and those risks, but what I thought I was hearing from David was that the staff estimate has in it quite a substantial adjustment process in housing, and then I would expect financial players to share that assessment.

MR. DUDLEY. I wasn't really addressing the point estimate of where housing was going as opposed to the uncertainty around that estimate. I would argue that the uncertainty around that

estimate is still quite wide. At some point it will be resolved. When it is resolved, that will be a favorable development, but I don't think we're there yet.

MR. WILCOX. I would just augment Bill's comment with two other observations. There's plenty of probability mass out in the tail. I think it actually is two-sided risk. We illustrated one side of that risk in our "severe financial stress" scenario. The other point I would make is that our projection for national house-price declines of 12 percent cumulative in 2008 and 2009 makes plenty of room for a very much more severe decline in Florida, California, and other highly stressed areas, and we have attempted to take that regional diversity into account. It's a rough exercise, to be sure, but we're not oblivious to the fact that some areas are doing much worse than the average. That is the nature of averages.

MR. EVANS. Thank you.

CHAIRMAN BERNANKE. Vice Chairman, did you have an intervention?

VICE CHAIRMAN GEITHNER. I was just going to say this. I think that you can do crude estimates of likely total losses across the U.S. economy and credit markets in a scenario like the baseline scenario in the Greenbook, and if you use Nellie Liang's study or the stuff done in New York, there's a huge amount ahead still. Even though financial market prices now reflect an expectation for house-price declines that are not significantly more optimistic than David's baseline scenario, I don't think you can say with confidence now that financial institutions have already provisioned for or written down losses to accommodate that. Because the trajectory of house prices will depend in part on financial behavior—the availability of credit—as financial institutions catch up and adjust to that and adjust capital and asset growth, et cetera, there is some risk that you'll push that expected path of house prices down further from where it is. So if institutions have to prepare for the possibility that you're going to have a much weaker economic outcome because there's

some probability around that, then there's a risk that they will produce that outcome through the combined effects of their behavior, which is why we're living with such a delicate balance.

MR. EVANS. They do seem to be taking out a lot of insurance on the downside, right—like your Merrill Lynch put option?

MR. DUDLEY. They've had to pay a lot for not very much insurance in the case of Merrill Lynch.

CHAIRMAN BERNANKE. President Rosengren—sorry. President Lacker, an intervention?

MR. LACKER. Thank you, Mr. Chairman. Just to point out that it must be the case that lower house prices have a positive effect on the homeownership rate. So there must be some mitigation, some good effect. We're obviously getting to where we need to get eventually. The question I have for the staff about this is, Have you thought about the sequence? I mean, it strikes me that we're likely to get to a point of stability in prices and construction activity before we get months' supply back down to some historical norm. Because it's sort of a stop variable, are you guys expecting it to converge smoothly, and have you thought about what measures of activity you expect to see stabilize first?

MR. WILCOX. We expect starts to stabilize next year, and that will be followed by a pretty considerable period of several quarters with house prices finally stabilizing. But we think that builders will look ahead and see that they've cut their additions to supply by enough to make even more rapid progress against their inventory of unsold homes. The question of the dynamics of house prices is a tricky one because it depends on what model of expectations one assumes that homebuyers will have. If every homeowner were a rational economic being, then it's pretty unambiguous that a lower level of home prices would elicit greater optimism on the part of home



shoppers that, gee, the valuation is better compared with yesterday; I should be more enthusiastic about getting into the housing market; I should be happier today than I was yesterday. I think it's at least an open question as to whether expectations aren't more extrapolative than that. We haven't seen any diminution in, for example, the Michigan survey in response to what homeowners expect to happen over the coming 12 months, and I think it's a serious possibility that they look at their recent experience and extrapolate that forward and conclude that over the next 12 months the user cost of owning a home is going to be really high. We just don't have a very good grip on exactly what the dynamics of prices and housing demand will be.

CHAIRMAN BERNANKE. President Lockhart.

MR. LOCKHART. I just want to point out that we hear a fair amount of anecdotal feedback suggesting that just determining what is the net real price for a house is not so easy because of incentives, particularly in multifamily but also new homes in general. You pay list, but you get a Mercedes and a year's worth of gasoline and your lawn mowed and a lot of things thrown in for the seller to hold the price close to what the list is. So I don't know how these things are actually measured to take into account those kinds of incentives.

MR. WILCOX. I don't know what the OFHEO does to capture the quality of automobile that comes in the driveway. [Laughter] I suspect that there's no adjustment for that.

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. On the inventories and the sequencing, which I think is very interesting because of how it plays out, I learned recently—and you can correct me if this is wrong—that, in the inventory of new homes for sale, the way that's counted includes permits that have been issued even though there's no home that's been built. So a developer may get permits but may not have started the home yet. It may just be sitting on a pile of permits. So if that's correct, and I think it is,

it means that, if you think about the sequencing of what's going to happen as demand begins to turn around, those permits don't have to get bought, but they may start building on permits that they've already been issued and they haven't started building yet. Is that a correct way of looking at the data?

MR. WILCOX. I don't know what the story is with regard to permits that you're mentioning. I do know that the cancellation rate of new home sales has declined a bit. Previously we were emphasizing that the high level of cancellations that the builders were experiencing was actually causing the supply situation to be even worse than one would infer from the Census Bureau data. Now the cancellation rates have come down, and so that situation is not as severe as it was six or nine months ago, I believe.

CHAIRMAN BERNANKE. President Rosengren, you have been patient.

MR. ROSENGREN. My question is for Steve. There have been judgmental adjustments to the domestic forecast reflecting financial headwinds in the United States. I'm wondering if we made the same adjustments for financial headwinds in Europe. You highlighted that residential investment looks a bit different in Europe, but they do have a lot of capital losses in their banking system. Their LIBOR-OIS spread is quite elevated, and at least in some European countries—Ireland and Spain as well as the United Kingdom, which you mentioned—housing has been quite soft. Are you doing judgmental forecasts to reflect those headwinds, or do we do it on the domestic side but not for the European outlook?

MR. KAMIN. As you correctly point out, Europe, in particular, does indeed have a lot of financial stresses; and some parts of Europe, particularly the United Kingdom as well as Ireland and Spain, are looking at some very serious weaknesses on the housing side. So we are, indeed, kind of in parallel but not exactly the same as our domestic colleagues building financial stresses into our

outlook. We don't necessarily increase or decrease the amount of financial stress in our forecast in lockstep with the domestic side. In particular, the European financial situation has probably gotten a bit worse over the intermeeting period, but some indicators haven't deteriorated to quite the extent that they have in the United States. Nonetheless, we have built in a fair amount of financial stress. One factor that's worth keeping in mind is that we built it into our outlook fairly early on. So we haven't adjusted downward the outlook for Europe by that much compared with the last couple of Greenbooks, but we had already built in quite a bit of weakening of activity, and a lot of that does reflect both the direct effects of financial stresses as well as their knock-on effects on tightening credit standards for banks.

CHAIRMAN BERNANKE. I have President Fisher, and then if it's okay with everybody, we should probably start our go-round. President Fisher.

MR. FISHER. Very quickly, I want to come back to the housing issue. You know, I've been more pessimistic than I think anybody around the table from the standpoint of peak-to-trough correction, and I find the numbers you mentioned very benign relative to my expectations. One issue that I'm trying to understand a little better in terms of its likely effect is that the real bulge in resets comes in 2009 to 2012 because that's when the alt-A resets kick in. We talked about this many, many moons ago, the ultra-poor documentation on those types of loans, in particular, and I'm wondering to what degree you're factoring this into your outlook going forward, particularly for those out-years.

MR. WILCOX. We're certainly aware of that. To my eye the numbers look astonishingly negative. For foreclosures, we have 2.5 million foreclosures this year and another 2 million foreclosures next year. We have a very bleak landscape built into the projection.

MR. FISHER. On that happy note, Mr. Chairman, thank you.

CHAIRMAN BERNANKE. Thank you, President Fisher. The go-round. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. The contours and basic outcomes of Atlanta's forecast are similar to the baseline of the Greenbook forecast. So I want to focus my remarks this morning on the underlying assumptions in both forecasts—assumptions that I view as pivotal and if we miscalculate could result in a longer-term policy error.

It seems that at every meeting there's great uncertainty around the outlook, and this juncture is no different. I perceive considerable uncertainty and debatable assumptions in the base-case scenario. As I see it, the key assumptions broadly are that housing stabilizes, perhaps as indicated by housing prices, in the second half of '09. Inflation pressures intensify in the near term but then abate because of economic slack and lower commodity prices and, as discussed, core import prices. Recent declines in oil prices stick, and prices remain more or less flat. Certainly since the Greenbook was published, we note the fluctuations just in the past few days that were referred to earlier, and I also can't dismiss geopolitical risks and the potential of a severe shock. Finally, financial market stress will persist for some months but diminish next year. These assumptions, using the respectable term "assumptions," have the feeling to me of "bets," not so respectable a term. The policy assumption integral to both the Greenbook and the Atlanta forecasts could be added to this, and that is that rate rises starting in 2009 won't choke off improving growth and will be enough to blunt remaining inflation pressures.

So I'll devote my comments to input from regional and other contacts that either serve to confirm or cast doubt on these assumptions. We oriented this cycle's questions to our Atlanta and Branch directors to, first, evidence of wage pressures and pass-through of higher costs. In interpreting the feedback, we noted some confusion between a business's management of its labor

costs versus general wage pressures. We heard that businesses are working to keep their total wage bills in check by raising wages for key talent but letting less critical employees go or cutting their work hours as an offset. The reduction in hours is attributed to some combination of weaker product demand and increased average productivity. Rising unemployment appears to be keeping wage demands in check. There are exceptions, such as the oil field services industry, for which qualified staff are in short supply, and certain skilled industrial and business trades in which local bottlenecks exist. In businesses enjoying strong export demand, some employers are utilizing bonuses rather than commitment to permanent wage increases. So our regional contacts did not indicate the development of broad-based underlying pressures on labor costs reflecting wage demands. As for inflation pass-through, our contacts reported widespread and growing efforts to pass through higher input costs. Pass-through efforts appear to be the rule rather than the exception. As one Branch director put it, people are passing through costs like crazy using high energy costs as cover.

The reports of my supervision staff regarding banking conditions indicate a continuing decline in asset quality and a very nervous interbank funding market. Foreclosed properties, both single-family and condo, are making up the majority of house sales and slowing the absorption of the oversupply of new homes. Some contacts are very concerned about the prospect of a second wave of foreclosures as option ARM mortgage borrowers, mostly concentrated in large states like Florida and California—these are borrowers who are currently paying less than the accrued interest—run up against maximum loan-to-value ceilings. New, higher GSE standards are resulting in fewer borrowers being qualified, putting downward pressure on house prices and bringing more foreclosures. Virtually all comparables for Florida residential valuation are based on forced sales and foreclosures, we are told. Beyond the deterioration in real estate portfolios, banks are reporting

growing problems in credits to food distributors, restaurants, trucking, and other petroleum fuel or input-intensive industries.

Based on my calls with financial market contacts, it seems that—no surprise—much of the attention in financial markets has shifted from private fixed-income markets to Fannie and Freddie. Fixed-income markets for private securities appeared to have improved relative to their lows since the current financial turmoil began. Although significant concerns remain, it appears that leveraged-loan deals are getting done. Volume is down, spreads are up, and the deals are very conservative, but deals are getting done. That said, one of the patterns in my calls over the past year has been that, every time one concern abates, another seems to jump up and take its place. Although the recent legislation appears to have alleviated concerns about the Fannie and Freddie senior debt, my contacts indicate that there is widespread uncertainty about what will happen to junior securities if the Treasury injects funds. Furthermore, more than once I heard the view that foreign holders of GSE debt are concerned that their positions are not as safe as they believed. One contact mentioned that the 18-month term of the guarantee is reportedly affecting some holders' maturity choices. In response to my question about the relative weakness of European banks, one contact suggested that they have booked much of their troubled assets in the "hold to maturity" account, suggesting slower recognition of losses and difficulties ahead. We confirmed with one large regional bank CFO significant deterioration of HELOCs in their portfolio and, by implication, broadly among regional banks. The option ARM problem, by contrast, is perceived to be possibly the next shoe to drop but, as I said earlier, not uniformly distributed across the country. Finally, we heard the view that markets perceive banks as facing protracted difficulty raising capital.

To conclude, the downside risks to growth have not diminished in my opinion. On the flip side, I agree that the upside risks to inflation are obviously a serious concern. In particular, I put a

fair amount of weight on the possibility that inflation will not moderate sufficiently without a more substantial tightening of monetary policy than that projected in the Greenbook baseline. My intermeeting internal and external discussions make it difficult for me to dismiss some of the alternative scenarios in the Greenbook, specifically the “severe financial stress” scenario, the “typical recession” scenario, and the “inflationary spiral” scenario; and in a high-uncertainty environment, I don’t view any of these scenarios as exclusive of another. That said, I see the risks to both the inflation and the growth objectives as very roughly in balance at this time. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. Overall there has been little change in the sentiment of my business contacts since our last meeting. Most are still reporting sluggish domestic demand with little evidence of any improvement over the near term. On the price front, everyone continued to cite cost pressures. Manufacturers have long lists of materials cost increases, while retailers note large increases in wholesale prices of imported consumer goods. Everyone discusses how they are planning to continue passing these costs along to customers in second-round effects. Undoubtedly weak market conditions will limit their efforts, but I suspect that many will be successful in raising prices significantly.

Turning to the financial situation, to start I should note that I did hear some good reports with regard to liquidity in Chicago financial markets. A contact at the Chicago Mercantile Exchange told us that they conducted extensive liquidity reviews for their largest clearing members, with special scrutiny of firms that had substantial volumes of hard-to-value assets on their books. The clearinghouse was very pleased with the results, finding that these firms had good access to liquidity.

Overall, however, my financial conversations this round were relatively downbeat. I did hear some interesting details, though, about the dynamics of the restructuring of credit intermediation. With commercial-mortgage-backed securities markets effectively shut down, a highly rated owner-developer of high-end shopping malls described his increasingly difficult attempts to find funding for his regular flow of balloon payments on mortgage properties. He has gone from restrictive loans from life insurance companies to attempting to put together his own structured-debt securitization. They want to issue bonds backed by the revenues generated from a pool of their high-quality properties and sell them to major fixed-income investment funds. This is one example of what economists like Kashyap and Shin estimate will be a reduction of at least \$1 trillion in lending to nonfinancial institutions due to mortgage-related losses at U.S. financial institutions. It is also an example of how firms are trying to find workarounds for the functions that intermediaries used to do for them. But such restructuring must be raising the cost of financing in ways that are not obviously amenable to mitigation through liquidity policies.

Turning to the national outlook, the information we have received over the past several weeks has contained many crosscurrents, but overall our forecast for output growth is little changed from our June projections. With regard to prices, I am concerned that inflation risks continue to grow. The most recent news on core prices has not been good. Oil prices may be coming off the boil, but they are still scalding. Prices are still down only to where they were in May. My impression from my contact calls is that the ultimate pass-through to final product prices of earlier increases could take a disconcertingly long period of time. Furthermore, I continue to think that the current funds rate in conjunction with our enhanced lending facilities represents a quite accommodative monetary policy stance, even given the disruptions in financial markets. If the policy path remains as accommodative as futures markets expect, then improvement in inflation will



most likely require fortuitous favorable developments in inflation expectations and more restraint from resource slack than we might have otherwise expected.

This brings me to three considerations that I would like to highlight as we evaluate the risk-management positions underlying our views on appropriate policy and our economic projections. The first factor is that, according to many econometric estimates, the 5¾ to 6 percent unemployment rate envisioned in the projections would provide only very modest restraint on inflation. In addition, costly reallocation could lead to less resource slack, perhaps temporarily driving the NAIRU above 5 percent. You know, when I talk to my staff, they assure me that there are very good reasons, demographically based, to believe a NAIRU under 5 percent. But I tend to think I've read a few too many papers on policy and policy mistakes where that's exactly the issue—when you think the sustainable unemployment rate is lower than it actually is. So that's a risk, I think.

The second factor is that many individuals and businesses see the large relative price changes in oil, food, and commodities as precursors to more-persistent inflation. Whether or not their assessments are analytically correct depends on their expectations of our policy response. A substantive response may be necessary to prevent self-fulfilling price increases and keep inflation under control. Words can take us only so far.

The third consideration is the potential diminishing returns through our efforts to mitigate distressed financial market conditions. It is my interpretation that our current accommodative monetary policy and suite of lending facilities are set to mitigate severe downside risks and the systemic risks that you mentioned earlier, Mr. Chairman. This is helpful under the assumption that reducing liquidity strains will assist financial markets to return to normal operations and prevent a permanent impairment of our financial infrastructure. But financial conditions seem unlikely to return to our previous perceptions of normal, at least for some time. Thus, I see a risk that extra

accommodation intended to grease the financial wheels could be left in place too long and prove counterproductive for price stability. Indeed, the old perception of “normal” likely is not the correct benchmark for us to use in looking for whether we are experiencing structural changes in the intermediation process in which new liquidity providers are playing enhanced roles in the lending process and in which risk standards are changing. So when thinking about market functioning, it would be useful to discuss this within a longer-term framework of what we can feasibly expect from market functioning and what central bank liquidity has the ability to usefully and appropriately influence. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, I may have to leave the lunch early. So before I start, I do want to bid Rick adieu. Rick, I remember describing you as charming in one of our early meetings. You have charmed me by your intellect and devotion. Anyway, I’m going to miss you. So I wanted to say that in case I do have to leave early.

Mr. Chairman, in the intermeeting period, I spent almost as much time in President Rosengren’s District as I did in my own—part as vacation but the rest consulting with some advisers and mentors in the People’s Republic of Cambridge at my alma mater. [Laughter] I mention this because I want to underscore that, in arguing a perspective, I tend to move away from the rather felicitous circumstances that prevail in my District. Even though things are slowing, we still expect employment growth to come in a little short of 2 percent a year, and our banking situation thus far is holding up rather well.

In terms of my national soundings, and you know the list and the group is familiar with it, the anecdotal evidence from everyone—from the bankers to the credit card companies to retailers to fuel producers, food producers, energy companies, shippers, equipment manufacturers,

homebuilders, and entertainment companies—confirms reports of progressively higher obstacles to growing their top lines and continued efforts to drive down their cost of goods sold through reducing their head counts, running very tight inventory cycles, tightening their operating expenses, and reexamining and in many cases cutting back significantly on cap-ex. Nationally I expect continued anemia on the growth side. We are, as you know, not at the extreme but at the low end of expectations for economic growth. I would expect zero growth as we approach year-end. As I said earlier, from our perspective we're only about two-thirds through the peak-to-trough correction on housing, and I view that as a continued weak influence. So the summary is that most of my contacts are planning around expectations of a prolonged U.S. and advanced-country slowdown and have a rather woeful outlook as to the growth side.

At the same time, there is also a woeful concern with regard to price pressures—intensifying cost pressures affecting their margins at a time when the stock market is most unforgiving of people who miss their mark. Even in the First District, I might note. I want to quote the Beige Book report from Boston: “Almost all contacted manufacturers voiced concerns about elevated . . . costs. . . . Respondents generally have raised their selling prices in recent months. . . . Over one-half of contacts expect to increase their selling prices further in the second half of 2008 and/or early 2009.” It went on to say that, while some contacts express worry that price increases have led or will lead to loss of market shares, others indicate that—and these are the key operative words—“customers have become more receptive to price increases because they see them as a consequence of generalized cost pressures.” Mr. Chairman, that passage captures the message that I'm receiving from my CEO and CFO contacts around the country. By and large, we appear to be transitioning from vigilance on the price front to acquiescence. Inflation expectations are, I think, becoming unmoored, and I believe they are, if not already adrift, at risk of drifting.

On the small business front, I do like to look at Bill Dunkelberg's recent reports from the National Federation of Independent Business. His most recent report indicates that the percentage of small business owners citing inflation as "the number one problem they face," rose to 20 percent in June, the highest rating since 1982, and that 41 percent of his respondents report raising selling prices. At the other extreme of size, to put this in perspective, Wal-Mart's CEO for the United States reported last week—and I quote this: "My biggest concern is inflation. This month we had an experience that Wal-Mart has never ever"—that's literally what he said—"had before, which is that a major supplier told us we need a 9 percent increase or we will not supply you at all." Now, he did not mention the name of that supplier. It could have been Unilever, which saw the volume of goods it ships slip 0.5 percent year over year in the second quarter. Yet according to our conversations but also quoted in the *Wall Street Journal* on August 1, Unilever's CEO reported that he "raised average prices on his thousands of products 7.4 percent," and then added that he "doesn't plan to reverse any price increases." Or it could have been one of the largest snack food companies, whose CFO has informed us that, after taking and having stick a 9 percent increase in price in March—I reported this at our last meeting—they will effect another 9½ percent increase in October. Here's the pithy quote he gave me: "Thus far we've been bleeding out price increases to our customers. Now our strategy is to bludgeon them—to broadcast our increases in the expectation that competitors will do the same." I doubt the supplier to Wal-Mart was Kodak. Last week the *New York Times* reported that "hurt by higher manufacturing and materials costs, the company said it will combat these cost pressures by passing on to consumers and raising prices on some products by as much as 20 percent."

I have lots of examples of similar responses. President Evans indicated similar pressures. President Lockhart did too. I'm not going to go through them. I will add, by the way, the one thing

that surprised me. Despite Disney's brilliant annual report of record earnings, they, too, plan to raise their single day prices by 5 percent, to \$60, in the next quarter. There is also a growing feeling, which I haven't heard before, among semiconductor manufacturers that, after years and years of constant price deflation, they expect that there may—and the operative word is “may”—be a bottoming out because of the raw materials prices they face and the wage prices and pressures they are receiving in China, which has become a major semiconductor manufacturer.

One might take heart from the recent correction in commodity prices. I agree with Steve that we have to be very careful about that. My smartest energy contacts have been expecting a correction in prices. Markets were overshooting. Natural gas prices have reacted to recent developments like the Barnett Shale and, even more important, the so-called Haynesville Play in Louisiana. The “oilies” note that increased Saudi supply hit our shores with the normal six-week lag. They were talking about production increases in May and June, and those have just hit our shores recently. So they're not surprised at the price reaction at the pump. But none feels that the basic demand–supply situation has been dramatically altered—much as you argued, Steve—and most expect structural prices to obtain at or near current levels. Now, what does “at or near current levels” mean in terms of price impact? I had a long conversation with the CEO of Burlington Northern, and just for data purposes, in terms of what they call their RCAF—an automatic cost-adjustment contract that covers 25 percent of the goods shipped by their rail—their third-quarter RCAF is 17 percent. The 75 percent of products that are not covered by that automatic contract are subject to a fuel surcharge. That fuel surcharge at \$120 a barrel is a 30 percent increase for the third quarter.

One might also take comfort in the purported calmness in compensation growth seen so far, along the lines of what I read in the *Financial Times* by Mark Gertler on July 29. I don't hear

confirmation of that benign argument among business operators. First, as President Evans and Mr. Stockton pointed out in our last meeting, labor compensation is not a good predictor of inflation. I remember Dave said that it's not that labor costs, which are a significant chunk of business costs, don't matter but that you can't necessarily take comfort from the well-behaved compensation thus far that you are not going to confront some inflation problems going forward. Now, the last anecdote I want to give you illustrates that point. Yesterday I had a lengthy visit with the CFO of General Mills. Until their fiscal year '08, which ended in May, they priced over many years an average increase of 0 percent. They took 2½ percent as the year ended, and they're taking another 5 percent this year. They are having to reexamine their elasticity models, he said. Here is what he said that worried me the most: They are finding those models less predictive because (a) "everybody is raising prices," and (b) consumer perception is that inflation is back. So, again, vigilance is giving way to acquiescence.

Mr. Chairman, I do want to comment very briefly on something I mentioned last time, which regards calculating the cost of goods sold. I am hearing more and more from companies that have shifted production to China a verification of the 18 percent number that the ministry gave us. Whether it's a hospital producer whom I talked to in California or a Black & Decker tool assembler in China, they're complaining not only about cost increases of 15 to 20 percent, depending on whether you're operating in the north or south, but also about the employee contract law that was just put into place, which in essence allows for almost an old-fashioned *scala mobile* Italian/French model, which feeds a wage-price spiral, and it is beginning to infect their wage cost and inject rigidities into their ability to operate in China.

So overall, Mr. Chairman, I am concerned, obviously, about economic growth. I think we, as President Lockhart mentioned, are in a very difficult spot. We have three enormously worrisome

scenarios facing us. I think we have to be very careful how we word ourselves on inflation. Last night at 6:00 National Public Radio opened their Marketplace report with this headline: “The Fed Fuels Your Pain.” We have a perception issue that we must address, and there are two ways to do it. One is by being strong in terms of how we argue the case of inflation. The other is to act by raising rates. I’m going to listen very, very carefully because, frankly, I’m undecided here as to what the right approach is. But I think we have to be careful when we state a balance of risks, which are enormous, that we don’t understate the fact that inflation is now being accommodated in the minds of the marketplace. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Fisher, I’m going to ask you a very innocent question. You’ve given many chilling anecdotes over the last few meetings about increases in prices, but the official statistics just don’t show anything like that outside of oil, gas, gasoline, and the direct commodity price increases. Do you believe that the CPI is not an accurate measure?

MR. FISHER. Well, I do see the CPI rising. The monthly report was not encouraging. The last 12 months have not been encouraging, and I think what worries me is the spread between core and headline. Core is rising as well, by the way. Even our own estimates indicate that. I do see it in headline numbers. The numbers I saw that were just reported I thought were quite alarming. You are seeing the pass-through. You’re hearing evidence of this in the anecdotal reports. I do believe, Mr. Chairman, that it’s visible in the data. I’m just trying to report what I’m hearing from the field against the background of much more sophisticated analysis, which I respect enormously. What I’m worried about is the perception.

I do believe that the data are very imperfect on inflation expectations—I noticed that David said that about the further-out expectations in the Michigan survey. If you look at the reliability of the data, the one-year survey, which has risen significantly, has been quite reliable over time. The

five-to-ten-year—I don't know if they're talking about ten years, five years, or somewhere between the two, and I don't think statistically that's been a very accurate indicator historically, but I'm not sure about that. So we have very imperfect hard data on inflation expectations, and I think that's when anecdotal evidence may be helpful. All I'm trying to do, Mr. Chairman, is report to you what I'm hearing from the field, and not from my District, and I hope it is useful in the deliberations.

CHAIRMAN BERNANKE. Governor Mishkin.

MR. MISHKIN. I think there's no question that headline inflation is very high right now. Clearly, when you get these kinds of increases in energy prices and food costs, you're going to have to reflect them in current prices. In fact, that's exactly what you need to have happen so that relative prices shift. The reality is that high oil prices have to mean that real wages fall. People have to conserve and not drive as much and so forth. So this is a normal process, and monetary policy does not control these relative price shifts. What I think is more critical is that, although there are some problems in terms of core, the effect has actually been quite limited given the incredible rise in energy prices. While it's important to think about headline in the long run, the information from core is very useful in terms of thinking about policy because it tells you whether this is spilling over into underlying inflation.

One of my concerns about going to anecdotal information and why I think we need to use an analytic framework in thinking about what is really driving the inflation process is that we do need to focus on the longer-run because that's what monetary policy can control. I get a bit nervous about these anecdotal concerns, which I think can tell us something about headline. Then we have to ask what they tell us about the longer-run context but not put too much weight on them. That's one reason that I think some of the analytic frameworks that we've developed here are very useful for thinking about these things. Thank you.



MR. FISHER. Well, in terms of the weight, again, I'm just one of 17 or 18, and I would weigh it accordingly. But I am worried that we've had a spread between headline and core for a long period now. I am worried that we're seeing core expectations pick up—modestly but they are beginning to pick up. I am worried that core expectations are above 2 percent. And I am particularly worried about developments on the global wage front in terms of how it affects the cost of goods sold here in the United States.

One last thing that I just started to detect—and again, it's all just hearsay—but I'm increasingly hearing reports of concerns of people who operate companies about the welfare of their employees and about their ability to pay transportation costs, pay food costs, and maintain the value of their 401(k) plans and, as President Lockhart reported, some way to try to manage, if not through formal demands on wages, at least to try to cushion their welfare. These are marginal influences, and I don't disrespect the analytical side. I do worry that data capture history, and I'm trying to give myself a sense for what is happening at the margin in terms of microeconomic behavior, and the report is only what it's worth. It's just one input in the many. Thank you.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. Economic activity in the Eighth District has remained roughly stable during the summer. Activity in the services sector has increased slightly, and except for the auto industry, manufacturing activity is also stable to slightly higher. Automotive contacts reported a variety of plans to lay off workers or to idle production, and at least three automotive parts suppliers will close plants in the District. Contacts in the auto industry are not optimistic that production will increase in the short term. Retail and auto sales have softened in recent weeks, and some District retail contacts have expressed concerns about summer sales. Many contacts continue to emphasize commodity price levels as a key factor in business decisions. They

are concerned both about the necessary business adjustments, given the new pricing structure, and about the implications for the overall level of inflation going forward.

The residential real estate sector continues to decline. Across four of the main metropolitan areas in the District, home sales through May declined about 18 percent compared with 2007, whereas single-family construction permits declined about 40 percent. The number of foreclosures in the St. Louis area in the second quarter increased to about 6,300 filings, up about 77 percent from last year. I am impressed, however, with the regionalism in the foreclosure situation, as some areas of the nation continue to have far higher foreclosure rates than others. In contrast with the generally positive reports in commercial real estate activity for the earlier part of 2008, recent reports have indicated more uneven conditions in the nonresidential real estate sector across the District.

Turning to the national outlook, I was encouraged by the recent GDP report for the second quarter, which showed growth at an annual rate of 1.9 percent. Real final sales increased at an annual rate of 3.9 percent. It now appears that the worst quarter associated with the current episode of financial turmoil was probably the fourth quarter of 2007, when the economy abruptly stalled. The slow- or no-growth period was through the winter, with the economy gradually regaining footing through the spring and summer. If there were no further shocks, I would expect the economy to grow at a more rapid rate in the second half of this year. But there has been another shock—namely, substantial increases in commodity and energy prices. I think it's important to be careful not to confuse the effects of this latter shock with the effects of the housing-sector shock.

My sense is that the level of systemic risk associated with financial turmoil has fallen dramatically. For this reason, I think the FOMC should begin to de-emphasize systemic risk worries. My reasoning is as follows. Systemic risk means that the sudden failure of a particular financial firm would so shock other ostensibly healthy firms in the industry that it would put them

out of business at the same time. The simultaneous departure of many firms would badly damage the financial services industry, causing a substantial decline in economic activity for the entire economy. This story depends critically on the idea that the initial failure is sudden and unexpected by the healthy firms in the industry. But why should this be, once the crisis has been ongoing for some time? Are the firms asleep? Did they not realize that they may be doing business with a firm that may be about to default on its obligations? Are they not demanding risk premiums to compensate them for exactly this possibility? My sense is that, because the turmoil has been ongoing for some time, all of the major players have made adjustments as best they can to contain the fallout from the failure of another firm in the industry. They have done this not out of benevolence but out of their own instincts for self-preservation. As one of my contacts at a large bank described it, the discovery process is clearly over. I say that the level of systemic risk has dropped dramatically and possibly to zero.

Let me stress that, to be sure, there are some financial firms that are in trouble and that may fail in the coming months or weeks depending on how nimble their managements are at keeping them afloat. This is why many interest rate spreads remain elevated and may be expected to remain elevated for some time. These spreads are entirely appropriate for a financial system reacting to a large shock. But at this point, failures of certain financial firms should not be regarded as so surprising that they will cause ostensibly healthy firms to fail along with them. The period of substantial systemic risk has passed. Of course, we have also endured a bout of systemic risk worries stemming from the operations of the GSEs. However, my view is that the recent legislation has addressed the systemic risk component of that situation as well. Because of these considerations, my assessment is that the chances of unchecked systemic risk pushing the U.S. economy into a severe downturn at this point are small, no larger than in ordinary times.

Unfortunately, while the threat from this source is retreating, another threat is upon us—namely, a substantial shock from increased energy and certain commodities prices, which is leading many to forecast slower growth during the fall. Real automotive output subtracted 1.1 percentage points from real GDP growth in the second quarter. Many contacts seem to attribute this largely to consumer reaction to increased gasoline prices. If this is true, then it seems to me that some of the most visible reaction to this shock may have already occurred, being pulled forward into the second quarter.

Labor markets have been weak, but I am not as pessimistic as most on this dimension. So far this year, the U.S. economy has shed about 387,000 nonfarm payroll jobs as compared with a drop in employment of 402,000 jobs during the first seven months of 2003 or 315,000 during the first seven months of 2002. Neither of these latter two episodes is associated with the recession label. These two years might provide better historical guides to the behavior of today's economy than those associated with the recession label, such as 2001, 1990–91 or 1980–82. This is one reason that I think the labeling game can mislead us in our thinking about the economy.

The main contribution that the FOMC can make to the economy is to keep inflation low and stable. The headline CPI inflation rate is running close to 5 percent measured from one year earlier. The University of Michigan survey of inflation expectations one year ahead reflects this reality with the most recent reading at 5¼ percent. The June CPI annualized inflation rate was a 1970s-sounding 13.4 percent. Of course, much of this is due to energy prices. Still, with these kinds of numbers we're going to have to do more than talk about inflation risks. Thank you.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. Developments during the intermeeting period have heightened my concern about downside risks to economic growth and slightly

allayed my concern about upside risks to inflation. Let me begin with growth. The moderate growth rate registered in the second quarter was disappointing, especially because it benefited from the temporary effects of the fiscal stimulus package. Moreover, the pattern of consumer spending during the quarter, with weakness in June, is worrisome. With all the publicity surrounding the rebate checks, households may have put them to work earlier than usual, especially since they were facing significantly higher prices for food and gasoline. This interpretation does not bode well for activity in the current quarter. Assuming no change in the funds rate this year, we have lowered our forecast for real GDP growth for the second half of the year about  $\frac{1}{3}$  percentage point, to just  $\frac{3}{4}$  percent, and project a correspondingly higher unemployment rate.

Our forecast for weak second-half growth reflects not only the unwinding of fiscal stimulus but also adverse financial sector developments. The credit crunch appears to have intensified since we last met. Evidence of tighter financial conditions abound. Risk spreads and the interest rates charged on a variety of private loans, including mortgages, are up noticeably, and lending standards have tightened further. Credit losses have risen not only on mortgages but also on auto loans, credit cards, and home equity lines of credit. As a consequence, the list of troubled depository institutions is growing longer. IndyMac and First National will not be the last banks in our region to fail. Indeed, the decline in broad stock market indexes is partly a reflection of the market's concerns about the health of the financial sector. Many financial institutions are deleveraging their balance sheets and reducing loan originations. For example, a large bank in my District has begun now in earnest to cancel or cap outstanding home equity loans and lines of credit, despite an ongoing concern about alienating consumers. Tighter credit is affecting demand. Anecdotal reports suggest that the plunge in July car sales partly reflects a

tightening of credit standards for auto loans and leases. A large bank reports a substantial drop in demand for mortgage credit in response to the recent rise in mortgage interest rates, and the anecdotal reports that we hear support the Greenbook's negative view of the effect of credit conditions on investment in nonresidential structures.

The housing sector is of considerable concern. House prices have continued to fall at a rapid rate, and futures prices suggest a further decline of around 10 percent over the next 12 months. This forecast seems reasonable given the overhang of homes for sale, the recent rise in mortgage rates, and the tightening of credit. Unfortunately, the risk of an adverse feedback loop from tighter credit to higher unemployment, to rising foreclosures, to escalating financial sector losses, to yet tighter credit remains alive and well, in my opinion. Indeed, stress tests conducted by some of the large financial institutions in our District reveal an exceptionally high sensitivity of credit losses to both home-price movements and unemployment. The "severe financial stress" simulation in the Greenbook illustrates my concern. It is not my modal forecast, but it certainly seems well within a reasonable range of outcomes. The probability of such a scenario has risen, in my view, since we met in June.

One partially mitigating factor that should help to support consumer spending is the drop in the price of oil since our last meeting. But to the extent that the decline in oil prices partly reflects reduced expectations for global growth, the net impetus from stronger domestic spending will be offset by weaker export growth. Continued declines or even stabilization in oil prices will, however, be good for inflation. We have revised down slightly our forecast for core inflation as a consequence. Moreover, the fact that we were not once again surprised on the upside by oil prices has had a small favorable effect on my perception of inflation risks going forward. That said, inflation risks obviously remain. Even with the recent decline, energy prices

are well above year-ago levels and are not only pushing up headline inflation but also spilling, to some extent, into core. Higher headline inflation could undermine our credibility and raise inflation expectations. If the public concludes that our implicit inflation objective has drifted up, workers may demand higher compensation, setting off a wage–price dynamic that would be costly to unwind.

Fortunately, the reports I hear are consistent with the view that no such dynamic has taken hold. My contacts uniformly report that they see no signs of wage pressures. They note that high unemployment is suppressing wage gains. Growth in our two broad measures of labor compensation are low and stable; and taking productivity growth into account, unit labor costs have risen only modestly. I tend to think of the chain of causation in a wage–price spiral running from wages to prices, but it is certainly possible that the causation also, or instead, runs in the opposite direction. Either way, though, faster wage growth is an inherent part of the process by which underlying inflation drifts up, and at present we see not the slightest inkling of emerging wage pressures.

Growth in unit labor costs also remains at exceptionally low levels. I would also note that I have looked for evidence of some increase in the NAIRU due to sectoral reallocation by examining the Beveridge curve, thinking that if there were sectoral reallocation we might see an outward shift in the Beveridge curve. I have detected no evidence of such an outward shift. These facts provide me with some comfort. Moreover, various measures of longer-term inflation expectations suggest that they remain relatively well contained. When we met in June, the Michigan survey of inflation expectations five to ten years ahead had recently jumped a couple tenths of a percentage point. I argued then that the respondents to that survey typically overrespond to contemporaneous headline inflation. Since that meeting, oil prices have come

down a bit, and so have the Michigan survey measures. Assuming that the funds rate is raised from 2 percent to 3 percent in 2009, my forecast shows both headline and core PCE inflation falling to about 2 percent in that year. So, in summary, during the intermeeting period, my forecast for economic growth has weakened, and that for inflation has edged down slightly. I consider the risks to our two policy objectives pretty evenly balanced at the present time.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. My outlook for economic growth and inflation over the next few years is broadly similar to the one that I held last meeting, although I think that the prospects for both inflation and economic growth in the near term have deteriorated since June. To a close approximation, my outlook ends up looking very similar to the Greenbook's baseline scenario.

The most significant change I am making to my outlook is to mark down the prospects for business fixed investment this year and next, based on the reports that I am hearing from the manufacturers in my District. There is an interesting short-term/long-term dynamic taking place in the manufacturing sector. The manufacturing CEOs with whom I have spoken say that over the long term they are very bullish on America. The dollar depreciation, increased transport costs, and rising wages in China all favor more U.S.-based production. A senior executive from Alcoa told me that, in his 35 years of working in the manufacturing sector, he has never seen the fundamentals point so strongly toward the United States as a profitable location for manufacturing. The short term, however, presents a more mixed picture for manufacturers. Although some industries, such as power generation equipment and aerospace, are running flat out and expect to continue doing so, companies in other manufacturing industries have received or expect to receive order cancellations. In particular, the manufacturers that supply the



automotive and commercial construction sectors are reporting a worsening outlook. Perhaps the best way to summarize the sentiments that I am hearing from manufacturers is to say that they see a bright future but they see challenging conditions over the next 12 months.

We all know that housing markets are extremely weak. Housing prices began their decline earlier in Cleveland than in the rest of the country, and we are now seeing some stability in housing prices. Despite that hopeful glimmer, we have not seen any pickup in home sales. Based on this experience, it seems that we still have a long way to go nationally before we see any pickup in residential construction.

In regard to financial markets, my chief concern is that lending is going to be constrained by lenders needing to maintain sound capital ratios in the face of asset write-downs and loan charge-offs. Balance sheet constraints and a declining risk appetite on the part of bankers mean that some worthy borrowers are going to be rationed out of credit markets, further restraining economic activity.

Turning to inflation, I anticipate that price pressures will intensify further before we see some relief, just as the Greenbook baseline scenario depicts. Manufacturers are still raising their prices in response to rising prices for raw materials that they purchase. Some companies have had fixed-price contracts in place for five and ten years, and as these contracts mature, the companies are passing on huge price increases to their customers. Consequently, I think that even after a point at which energy and commodity prices flatten out, prices at the wholesale and retail levels are likely to adjust upward for a while longer.

I just said that manufacturers are expecting some challenging times ahead. One reason is that many of them are caught between weakening demand conditions and soaring input costs. Sherwin-Williams represents an extreme case, but I think it illustrates the situation pretty starkly.

The CEO of Sherwin-Williams told me last week that their business is down more than 20 percent in sales channels both to new construction and to existing homes. They have been in business for 126 years, and the last time this occurred was during the Great Depression. Despite these dismal sales, they are having to raise prices. The CEO told me that the company typically raises prices once a year, but in July they announced their third price increase this year. In the entire history of the company, they have never before had three price increases in one year.

So I continue to see the risk to my projection for output as being to the downside for the reasons that we have been discussing for some time—high energy prices, severe financial stress, and a depression in the housing markets. The risk to my inflation outlook is weighted to the upside because I am concerned that inflation could remain elevated for too long, potentially destabilizing inflation expectations. The Greenbook baseline scenario expects the near-term inflation picture to worsen in the second half of this year before improving gradually over the entire forecast period. This pattern is a concern to me. In that environment, I worry that inaction on our part before next year could be seen as complacency on our part. So when I stack up the two risks against one another, I regard them as fairly equal right now. But my outlook is conditioned on a federal funds rate path that begins to increase about a quarter earlier than called for in the Greenbook baseline. I will speak to the relevance of this factor when we discuss monetary policy in the next go-round. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. Economic conditions in the Third District remain relatively weak, but they are not materially different from what we and our business contacts have been expecting for the past several months. Manufacturing and residential construction sectors continue to show a slow decline. Payroll employment in our three states fell

in June, but it is still above the levels of where it was three months ago and so has been performing somewhat better than in the nation as a whole.

The pace of retail sales seems to have been softening, and commercial real estate firms indicate that most office and industrial markets have weakened slightly since the spring. My business contacts generally expect weak growth for a while. Manufacturers do expect a rebound during the next six months; but most other sectors, particularly retail sales, anticipate only soft or slightly improving conditions in the near term. Residential real estate is not expected to strengthen appreciably in the second half of the year. Banks expect somewhat sluggish growth in overall lending for the rest of the year, although compared with some regions, banks in our District are in pretty good shape. There are stresses, but they seem to be manageable. Credit, however, is generally available to businesses, and we hear only sporadic information from businesses that they are unable to obtain needed loans.

For some time my business contacts have expressed concern about rising energy and commodity and transport prices. Our business outlook survey's prices-paid index rose yet again in July, and it is now at its highest level since March 1980. Although the prices-received index edged down slightly, it remains at a very, very high level relative to historical standards. The BOS's future prices-received index rose to 49.6 percent, which is the highest level it has been since January 1989. This indicates that roughly half the manufacturing firms that responded to our survey expect the prices they receive for their products to be increased over the next six months. To gauge the extent to which manufacturing firms have been able to pass on rising costs to their customers, we asked several special questions about product pricing in our July survey. More than 60 percent of our respondents indicated that, since the beginning of the year, they have been able to raise prices and pass along increased costs to their customers. About

26 percent said this took the form of increases in base prices. Almost half of them had increased base prices. The rest said they have used either surcharges or escalator clauses and, in some cases, combined those with base price increases as well. Surcharges and escalation clauses are not likely to go away anytime soon and may even become more widespread. About 56 percent of our respondents indicated that price escalation clauses and surcharges are likely to be a part of their pricing in the future. Further, since a large number of firms have already built cost increases into their base prices, it is not clear at all that prices will come down quickly, even if oil prices stabilize at a lower level.

On the national level, the incoming data since our June meeting have been mixed but largely in line with my expectations for the near-term path of the economy. Real GDP growth for the second quarter came in somewhat weaker than many expected, although I will note that as recently as April many people were expecting negative growth in the second quarter and it is now almost 2 percent. But I think that the strength is a remarkable testament to the ability of this economy to weather shocks from financial market disruptions, a severe housing correction, and surges in energy and commodity prices. Nonfarm payroll employment has fallen an average of 66,000 jobs per month over the last seven months—a weak number to be sure but not nearly as severe as the job losses over the last three recessions, which averaged nearly 180,000 jobs a month. Since our June meeting, we have taken further steps to address fragile financial markets that were manifested by the difficulties surrounding the GSEs and the IndyMac takeover.

On balance, my outlook for the economy is little changed, although the financial market developments since our last meeting have marginally increased the uncertainty surrounding my forecast. I do see near-term weak growth for the economy, but I continue to expect an improvement in output and employment growth next year as the economy rebounds closer to

trend. Unfortunately, there has been a resurgence in financial market volatility, especially on the part of the banking sector and mortgage markets related to the problems of the GSEs. The liquidity in the interbank and primary dealer markets appears to have improved somewhat relative to the first quarter of this year.

I read the conditions in the financial markets and the wide spreads on selected assets as having improved somewhat on net and the spreads we are seeing increasingly reflecting real credit risk as opposed to dysfunctional markets. As I indicated in my questions earlier, we should not use such spreads as the primary criteria for assessing the fragility of the financial markets. Moreover, we must be cautious in using monetary policy or other tools at our disposal as a form of forbearance that delays the necessary adjustments in the pricing of various financial claims. I think we need a high hurdle—that there are real market failures—before we intervene to stem liquidity desires on the part of traders or attempt to influence the price of specific asset classes. To agree with President Bullard's comments, we should begin to deemphasize and de-stress the importance of systemic risk because I think it is gradually dissipating as firms adjust to the more volatile and risky environment.

The current state of the financial markets seems to me to bear some resemblance to the financial headwinds analogy that many people referred to during the early 1990s. Indeed, spreads on many forms of business and consumer loans are behaving now much in the way as they typically behave during recessionary times as credit risks rise. In the early '90s, monetary policy was less accommodative than it is now—at least the funds rate reached a low point of 3 percent from October 1992 to February 1994—and during that time headline PCE inflation ran about 2 to 3 percent. The real funds rate, measured by a one-quarter-ahead forecast of the CPI from the professional forecasters, was minus 0.1 percent over the six quarters from 1993:Q3 to

1994:Q4. Currently, the real funds rate using the same measure of one-quarter-ahead professional forecasters' CPI stands at minus 1.1 percent.

The inflation outlook remains a cause of concern. Headline inflation is higher, and there is evidence of modest pass-through to core inflation measures. Inflation compensation on the six-to-ten-year horizon has risen modestly. Inflation compensation at the near term has fallen with recent declines in oil prices, but it remains volatile. The staff has suggested that a portion of the increase in the longer-dated inflation compensation measures may reflect an increase in inflation risk premiums. That is, markets are uncertain about the long-run path of inflation. This is not terribly comforting. It suggests that our credibility may be waning.

Despite the recent drop in oil prices, I remain uncomfortable with the longer-term inflation outlook. Indeed, the focus of monetary policy must be on the intermediate to longer term, and we must resist the temptation to act as if our funds rate decisions can manage the outcomes over the very near term. Year-over-year inflation, headline CPI and PCE inflation, have now been consistently above 3 percent since October 1987. Year-over-year core PCE inflation has exceeded 2 percent every month but one since April 2004. That is four years. Businesses are reporting an increased willingness to pass on cost increases. Near term, we might get some moderation in headline inflation, if the recent drop in oil prices holds. This might result in less upward pressure on inflation expectations, at least in the near term. Of course, as has been pointed out, oil prices are notoriously hard to predict, and we may well see a resurgence in oil prices before the year's end; but we don't know. More important, a drop in oil prices will only temporarily mask what I view as the underlying inflationary pressures. Oil prices have clearly exacerbated the recent numbers and may mitigate them in the near term going forward.

But my concern is that the real source of intermediate-term to longer-term inflationary pressures comes from our own accommodative policy, whose consequences for inflation will be felt only over time. We are unable to control the rise in oil prices and its consequences for inflation in the short term, but we must hold ourselves accountable for the longer-term consequences of our choices. Should we maintain our accommodative stance for too much longer, my view is that we are likely to see higher trend inflation in the intermediate term and a ratcheting up of inflation expectations. If that scenario unfolds, it will take a much more costly policy action to re-anchor those expectations than the cost of a preemptive move to raise the funds rate in the near term.

To be sure, shifting policy to a less accommodative stance will be a difficult decision to make, given the continued volatility in financial markets and the projected near-term weakness in employment and output growth. However, what has been referred to as the tail risk of a very negative growth outcome has decreased since the start of the year, whereas inflation risks have increased. I think the enhancements we have made to our liquidity facilities should be sufficient to address any remaining dysfunctions in the financial markets, but they will not address the credit or solvency issues, nor should we expect them or desire them to do so. The markets will have to do that admittedly heavy lifting. I do not believe that we can wait until employment growth and the financial markets have completely turned around to begin to reverse course. But by our aggressive attention to short-term risk to growth and financial turmoil, we do put at some risk our ability to deliver on our intermediate- and longer-term goals of both price stability and sustainable growth. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Why don't we take a coffee break until 11:20.

[Coffee break]

CHAIRMAN BERNANKE. Okay. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. The Boston forecast used for the June meeting expected that the unemployment rate would peak at approximately 5.7 percent. Unfortunately, with the July employment report, the unemployment rate has already reached 5.7 percent, and we expect the economy is likely to grow less than potential for the next several quarters. With the unemployment rate rising in the past three months by 0.7 percentage point and payroll employment declining for the past six months, I am concerned that there remains a significant risk that the second half of this year would look a lot like the “severe financial stress” or “typical recession” scenarios. My concern reflects the potential impact of further deterioration among financial institutions and financial markets that may create a significant headwind for the economy and the likelihood that economic problems are growing in other countries, which would slow one of the few bright spots in the economy—exports.

Since our last meeting, much has been written about the problems at the GSEs. Concern with the viability of the GSEs and potential future losses has contributed to mortgage rates rising despite our past easing, the weak economy, and diminished demand for mortgages. With financial institutions showing little interest in lending to subprime or jumbo borrowers, the increased cost for individuals that qualify for conforming loans is likely to weaken the one part of the housing market that had been relatively resilient to financial problems to date. For potential buyers, higher interest rates and the likelihood that housing prices will continue to fall provide little current incentive to purchase a home, while the job losses are providing an immediate need for some owners to sell their homes. We need the housing market and housing prices to stabilize, which I had hoped would occur in the second half of this year, but now it looks as though it will be deferred until next year.



Falling housing prices have created significant collateral damage. Liquidity problems that began one year ago remain in play. The capital-constrained financial institutions that are forced to shrink their balance sheets may pose a significant additional problem in the second half of this year. While many of the largest banks that suffered significant losses last year were able to raise additional capital fairly readily, the capital losses on newly issued bank equity may have reduced many investors' appetite for providing new capital for banks until it is clear that the economy is recovering. The falling national housing prices and problems in commercial real estate in some sectors of the economy are now affecting regional and community banking institutions, many of which are unlikely to get equity infusions and thus will be forced to shrink. A reduction in the willingness to lend, as represented by the Senior Loan Officer Opinion Survey, has often portended a reduction in credit to bank-dependent borrowers. As we get a more traditional credit crunch compounding the liquidity problems, I am concerned that credit will be less available to consumers and businesses and further slow consumption and business investment.

Since the June meeting, the stock market has fallen 7 percent; and with the number of large financial institutions experiencing very elevated CDS spreads and stock prices in the single digits, the failure of one or more relatively large domestic or foreign financial institutions is a real possibility. In such an environment, the assumption of annual equity prices rising 7 percent in the rest of this year and 12 percent in 2009 as assumed in the Greenbook would seem to have some significant downside risk. Elevated unemployment rates and a flat or slightly falling trend in wage and salary inflation suggest an absence of the inflationary pressures in labor markets that would lead to rising inflation once energy and food prices stabilize.

These factors give me some confidence that we will see core and total inflation in 2009 close to 2 percent. Since our last meeting, labor markets have been weaker than expected, and oil

prices and many other commodity prices have fallen, in part as a result of the concern with a slowing global economy. Although total inflation measures are clearly higher than any of us would want, these readings appear to be transitory responses to supply shocks that are not flowing through to labor markets. In fact, evidence from the labor market would seem to indicate that the downside risks to the economy are affecting labor markets through job losses but are not creating an environment in which labor tries to offset supply shocks with higher wage demands. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Before I begin, let me add my words of welcome to Betsy Duke, welcoming Governor Duke back to the Federal Reserve System. I say “back” because she has served excellently on our board of directors beginning almost 1 years ago. She’s a fast friend and strong supporter of the Federal Reserve System. I’m delighted that the long wait for her installation is over, and I look forward to working with her; but I don’t want any of my compliments to her to be detrimental to her effectiveness. [Laughter]

The Fifth District economy has remained weak in recent weeks. Manufacturing and service sector activity fell. Real estate conditions remain sluggish. Labor markets remain soft. Export activity remains the bright spot, with reports of sustained growth in outbound cargo at District ports. In a new development, however, manufacturers’ expectations for the very near future turned negative in our most recent survey. This is very unusual. Respondents are typically relatively optimistic about things six months from now. Retail contacts indicate that the decline in sales broadened in July in our survey, and there aren’t many reports mentioning the effect of tax stimulus checks. Price expectations for both raw materials and final goods rose in our July survey, and some of those measures are at record highs.

At the national level, my outlook for real growth is broadly consistent with the Greenbook's this time. I expect sluggish growth to continue through the remainder of the year, with a pickup beginning sometime next year. Housing is likely to continue to be a drag, though a diminishing one, until then. Consumer spending is likely to remain subdued, and business investment is likely to moderate somewhat. I expect payroll employment to continue to decline for a while at about the current pace—a pace that, as others have noted, is quite modest relative to what we typically see in a recession. I think the most likely outcome is for us to continue to skirt an outright recession. I think there is some risk of a broader and sharper contraction. I believe the magnitude of that risk is modest, but it's not negligible to me. Business investment could deteriorate, a risk that's most prominent in the nonresidential construction sector that we discussed earlier. But this is a small component of aggregate demand, smaller than housing; and given the nature of gestation lags in this sector, I think a downturn is likely to be gradual rather than abrupt. Household spending probably poses the greatest risk to growth at this point. Consumer spending has flattened out in real terms, although that's what one would expect given the increase in food and energy prices that we've seen. Given the difficulty of assessing the extent to which tax rebates are propping up consumer spending right now, we do not know how much Q4 consumption is going to be affected by the stimulus rolling off.

Potential growth effects of credit constraints or financial headwinds have gotten a lot of attention these days. I remain skeptical about the magnitude of the drag on consumption and investment spending that credit market conditions are likely to create. We have, of course, seen reports in the Senior Loan Officer Opinion Survey of tightened credit terms, but through June both C&I and consumer loans have continued to grow. I would note that we are hearing in the Fifth District concerns from some of our smaller institutions that some large banks are bidding

aggressively for deposits—this has been going on for several months now, of course—and as a result, the smaller banks are paying more to fund their loans. We're also hearing now—and this is a new report—of larger banks cutting back on fed funds lending to smaller institutions, no doubt out of a concern about possible bank failures.

What I think we're seeing in banking markets is more of a reallocation of activity among banks. Different institutions have been affected very differently by recent events depending on the strategies they chose to pursue in the years preceding this episode. As a consequence, intermediation is just shifting from some institutions to others. In fact, we've heard of banks picking up business that other banks are shedding. Anecdotes about particular banks cutting back on lending thus need to be taken with a grain of salt, and I don't think they're necessarily representative of the banking sector as a whole. In fact, there was a really egregious case in the *New York Times* of people not getting credit from banks because of this credit crunch. In paragraph 6, one is introduced to their lead anecdote: a borrower at Wachovia who was denied credit. In paragraph 22, we find out that he actually got credit two weeks later at this same institution. So I'm a little skeptical about all of this anecdotal evidence about credit constraints. It's undoubtedly the case that credit standards have tightened, but the environment is such that a lot of borrowers have gotten genuinely weaker.

I mention all of this just because it influences how I feel about arguments that credit market conditions make the current level of the real funds rate any less meaningful as an indicator of the stance of monetary policy. I just don't find those arguments convincing right now. The real funds rate using the Greenbook's forecast of overall inflation four quarters ahead is lower than it has been at any time since the 1970s. In fact, this measure is about 1½ percentage points lower than the lows

it reached in 2003 or 1994, and I think this is to my mind a better way to measure the actual real federal funds rate than what's plotted in the Bluebook.

The Greenbook forecast is that core PCE inflation will rise to 2.6 percent for the second half of this year and then gradually subside to  $1\frac{3}{4}$  percent a year or so after that. This forecast is a very risky path, I believe, because at any point along that hump, higher inflation could well become embedded in expectations. I think getting back to price stability after this episode is going to depend critically on the stability of inflation expectations, as many of you have noted. It is true that TIPS compensation measures have been reasonably steady for a few months and that wage rates show no sign of accelerating as yet. But if we wait to raise rates until wage rates accelerate or TIPS measures spike, we will have waited too long. I think that's very clear, and it will cost us too much to recover our credibility.

Accordingly, I believe that the biggest policy risk we're going to be facing in the months ahead is the risk of waiting too long. In past episodes of economic or financial weakness, we've been unwilling at times to raise the funds rate until we were almost completely certain that economic recovery would be sustained. I do not think that we can afford that luxury at the present time. The risk is too great that inflation expectations will ratchet up again. We need to be prepared to raise rates even if growth is not back to potential and even if financial markets are not yet tranquil, and we need to be prepared to raise rates even if we think that we might have to reverse course. After all, we cut rates aggressively even though we were not certain that a recession was in store for us and, in part, on the grounds that we could reverse course if it proved that we cut too far. To insist on more certainty to raise rates than to reduce them would introduce a fatal asymmetry in our reaction function.

Let me add a comment or two inspired by some of the discussion around the table. I want to commend President Bullard's discussion of systemic risk. You mentioned this earlier in your Q&A session, Mr. Chairman. This is a notoriously slippery concept. In popular usage, it seems to mean an episode in which one bad thing happens followed by a lot of other seemingly related bad things happening, and as such, it's a purely empirical notion without any content or usefulness by itself as a guide to policy. It doesn't say whether those other bad things are efficient—things that ought to happen—or inefficient and preventable by suitable policy intervention. To invoke the notion of systemic risk to support a particular policy course requires theory. I spoke about theory last night, but it requires some theory, some coherent understanding of the way you think the world works. The theoretical literature related to systemic risk is relatively young, and this isn't the place to go into it. I've said before that I think it would be useful for this Committee to learn more about this. The Committee might be surprised that the literature provides only relatively tenuous rationales—I think is a fair judgment—for policy intervention. I hope, Mr. Chairman, that the group you've commissioned to study the meaning of unusual and exigent circumstances can explore this terrain in a little more depth. Going forward, I think our deliberations would be aided if we were to strive to put our theoretical frameworks on the table when discussing how financial markets work and what we ought to do about them.

In case there's any suspense, for my own money—and this is just one man's view—I haven't seen a convincing case for the existence of policy-relevant market failures in the financial markets in which we've intervened, apart from the usual distortions owing to the federal financial safety net. We systematically expanded that safety net. I believe what we've done has been to subsidize selected borrower classes and prop up prices of various financial assets, and I think the

problem we face now is the tremendous dependency of financial institutions and markets on our credit. Thank you.

CHAIRMAN BERNANKE. Thank you. President Stern.

MR. STERN. Thank you, Mr. Chairman. Let me make just a few comments about the Greenbook forecast at this point, which I found quite useful for thinking about policy going forward only in part because it is quite close, at least in broad overview, to the forecast I submitted before the June meeting on the economic outlook, inflation, and so forth. In any event, given the alignment in these forecasts, I think there are several characteristics worth emphasizing. First, financial headwinds persist—we have talked about this for quite a while—and the Greenbook now assumes more stress and more persistence than it assumed earlier. Second, the inventory overhang in housing persists with negative implications for activity and for prices in that sector. Third, real growth is subdued over the next several quarters at least. Against the background of the Greenbook forecast, growth over the balance of this year in excess of 1 percent in real terms would have to be considered a positive surprise. Growth in excess of trend next year would have to be considered a positive surprise. Finally, with regard to inflation, headline inflation abates after the current quarter, although overall both headline inflation and core inflation remain above 2 percent through 2009.

I realize that there's considerable uncertainty surrounding all of that and that not everybody shares that assessment, but I think it's worth emphasizing those features because we need to try to think several months and several quarters ahead in terms of the environment in which we will be making policy decisions. If these forecasts are at least in the ballpark—at the risk of perhaps belaboring the obvious—it seems to me that a major message of those forecasts is that the policy environment is likely to remain significantly challenging for several more quarters at least. I could put that another way. It seems that evolving readings on the economy and inflation are not likely to

line up appreciably at all with either aspect of the dual mandate over the next several quarters.

Thank you.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Mr. Chairman, let me say that the Tenth District probably, on the whole, performed a little better than the national average in the industries that we have; but in terms of job growth, it has slowed. At the same time, we're still adding jobs in the region, and our unemployment rate remains relatively low compared with national measures. Although wage pressures actually do show some elevation relative to our Beige Book survey, they have obviously eased a bit in recent months. But it's interesting that, as we talk and monitor the labor conditions and we talk to some of the labor unions, there is a great understanding that they're losing ground. They are going to begin entering contracts at the end of this year and in the next year, and how they approach that is extremely important because, again, they are looking and talking now about cost-of-living adjustments and those sorts of things, which gives me some pause. According to our manufacturing survey, our activity actually strengthened in July, although the expectations for future activity have diminished somewhat. Not surprisingly, manufacturers producing energy and agriculture and in export-related markets continue to operate at relatively high levels whereas the other areas within the District are showing some slowdown.

Let me talk just a second about oil. Although oil prices have declined, as was noted, they are still high enough that capital spending and production remain elevated and look to remain so in the foreseeable future. In fact, some of our industry contacts suggest that, as long as expected prices for oil remain in the \$70 to \$80 range, there should continue to be a fair amount of investment in that particular sector. As you well know from reading the *Wall Street Journal*, we did have the SemGroup go bankrupt in the Tulsa area. It has had, I think, fairly confined effects. One of our



regional banks took some pretty heavy losses. They're very well capitalized and did recapitalize some of it, so they've not been dramatically affected by it. Local producers are in the worst bind because they haven't been paid for some of the oil delivered and there's no other party to contract with for future deliveries. So that has brought a lot of uncertainty in the local area about where to provide some of this oil that they're producing.

In my discussions with businesses around the District, it's interesting that there's a lot more conversation about and focus on managing your price strategy in this environment. As has been true for a while, fuel surcharges are prevalent, and firms are able to pass those along with a fair amount of ease. In addition, businesses are reporting that materials suppliers are placing 10-day to 30-day time limits on their price quotes. Finally, most price indexes in our manufacturing survey remain near historically high levels, and plans for future pass-throughs have actually intensified.

Turning to the national outlook, my outlook for growth has not changed materially since the last meeting. I expect that growth will slow in the second half because of these higher energy prices, some weakness in the labor market, and sluggish activity in some of the manufacturing sectors. The fact is that the uncertainty regarding the economic outlook is considerable, and downside risk to growth in the near-term future is there. These risks are being addressed, from our perspective, by our current stance of accommodative monetary policy. So we are addressing that uncertainty. The point I would like to make is that I'm less uncertain about the outlook for core inflation. We have seen erosion in longer-term inflation expectations, and I believe inflation risks have actually risen. If core inflation rises in the second half as expected, there is a real possibility that inflation expectations will become unanchored, especially if we maintain our current accommodative stance of policy. An expected leveling-off of food and energy prices and slack in the economy could help moderate upward pressure on inflation, but I do not think they will be

enough to actually bring inflation down to an acceptable level. In fact, if we maintain the funds rate at 2 percent, I think inflation is more likely to move higher than lower over the medium term, and that concerns me. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN GEITHNER. Thank you, Mr. Chairman. Like the Greenbook, our modal forecast shows weaker real activity and slightly higher core inflation over the forecast period. Downside risks to growth remain substantial, in my view, and have probably increased relative to what we thought in June. Risks on the inflation front remain weighted to the upside, perhaps somewhat less than in June, but this is hard to know with confidence. The adverse growth risks are worse for several reasons. The labor market and labor income are weakening more quickly than expected. Although there were some tentative signs of stabilization of housing demand in the spring, demand seems to have fallen further since. Credit conditions are tighter and are expected to be tighter longer, and this seems likely to produce a further deterioration in overall demand—note, of course, the reduction in credit for autos, the rise in mortgage rates, and the more conservative lending standards for consumer and corporate credit. Growth outside the United States seems likely to slow further. Of course, fundamental to this dynamic, as has been true for 12 months, each shift in perceptions that the bottom in overall economic growth is further away produces additional stress for financial institutions and markets, adding to the intensity of prospective financial headwinds and to concerns about downside risks to growth.

Now, the adverse tail on the inflation front remains significant. Many measures of underlying inflation suggest a broad-based, if limited to date, acceleration in the rate of underlying inflation. Market- and survey-based measures of long-term expectations are high. Surveys suggest that firms are able to pass on some part of the acceleration in energy and materials costs. On the

more positive side, energy, commodity, and materials prices have declined significantly, principally it seems because of expectations of slower growth in global demand. Growth is moderating significantly around the world, and it's going to have to moderate further in the most populous parts of the world as central banks there get monetary policy tighter.

The growth of unit labor costs has been and is expected to be very moderate here. Profit margins still show plenty of room to absorb cost increases, and as David reminded us, you can have a relatively benign outlook for the path of core inflation without margins narrowing very dramatically. Inflation expectations have not deteriorated meaningfully here, even with the flatter expected path of monetary policy in the United States. Of course, it's very important that inflation expectations and pricing power moderate from current levels. If some of the downside risks to growth materialize, this will happen, and inflation risks will moderate. If, however, the economy continues to prove to be resilient to these downside risks, then we will face higher inflation. On balance, the rate of growth in underlying inflation suggests that growth in demand in the United States will have to be below potential for a longer period of time if inflation expectations are to come down sufficiently. This means that we will have to tighten monetary policy relatively soon compared with our previous behavior in recoveries—perhaps before we see the actual bottom in house prices and the actual peak in unemployment.

However, at this point, the risks to real growth remain critical. In my view, we need to have more confidence that we have substantially reduced the risks of a much sharper, more protracted decline in growth before we begin to tighten. I think it is unlikely that we will be able or will need to move before early next year. Short-term market expectations for monetary policy in the United States seem about right at present. I don't see a strong case for trying to alter those expectations in either direction at this point. To try to pull forward the expected tightening would risk adding to the

downside risk to growth and magnifying the risk of a much more severe financial crisis. On the other hand, if we avoid some of these downside risks to growth, then policy will need to tighten more quickly, perhaps, than the expected path now priced in the markets.

The evolution of monetary policy expectations and of inflation expectations since May illustrates how uncertain the markets are about what path of policy will be appropriate. But the pattern of changes in both of these measures of expectations suggests that the markets believe we will get this balance right—that we will do enough soon enough to keep underlying inflation expectations from eroding materially. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. Like others around the table, I made only small revisions to the central tendency of my forecast going forward as a result of the developments of the intermeeting period, maybe a slight reduction in the path of output and a quicker decline in headline inflation owing to the oil prices. But I think more important than any shift in central tendencies is the sense that the information tends to reinforce—to reduce the uncertainties around—the basic contours of a projection in which the economy operates with a wider output gap and a lower inflation rate on balance over the next 18 months or so than it has over recent quarters.

About the output gap, the incoming information strongly suggests that we are on a trajectory that at least for some time will have the economy growing appreciably below the growth rate of its potential. The most obvious evidence is the persistence of a soft labor market—continuing declines in employment and no sign of near-term strengthening in the initial claims data. I agree that the declines in employment, as several of you have pointed out, are not consistent with a recession, but they're certainly not consistent with the economy growing close to its potential. You need another

150,000 or 200,000 jobs rather than minus 60,000, which is where we are now. So I think the economy is likely to grow below potential for some time.

Even on the spending side, the decline in consumption in June, when rebate checks were continuing to hit bank accounts, and a further sharp drop in auto sales in July might be early signs that households are beginning to pull back under pressure from higher energy prices, job worries, declining house values, and reduced credit availability. To be sure, one month's consumption data along with auto sales, which are subject to all kinds of idiosyncratic influences, are not enough to justify a major change in outlook. But as President Lacker noted, household spending has for some time been a source of downside risk to the forecast. At some point, household spending could begin to reflect attitudes, and this information at a minimum seems to underline those risks as well as to point to sluggish growth of spending in the third quarter.

Soggy economic news has extended to our trading partners, where actual activity and expected activity also have been marked down. The tone of news from abroad has been decidedly downbeat, as those economies feel the effect of weaker purchases from the United States, continuing financial strain, softening housing markets, and higher energy prices. Much as in the United States, attitudes abroad seem weaker than the data; but the euro area did report a record decline in retail sales in June this morning, and my sense is that our trading partners are facing larger downside risks to growth as well as a markdown of central tendencies. The dollar hasn't changed much on balance for four or five months now. With a stable dollar and weaker demand abroad, production in the United States will be getting a lot less cushion from net exports over the next few quarters than it did in the first half of the year.

Finally, despite the downward movement in Treasury interest rates and in the expected federal funds rate path, financial conditions for households and businesses have tightened since the

last FOMC meeting. Savers and intermediaries have become even more cautious amid concerns about deepening losses spreading beyond subprime mortgages, about the safety of uninsured deposits at regional banks, high volatility in markets, and the possible weakening of the underlying macro situation. Lenders are hunkering down to endure a long period of rising credit problems and great uncertainty. I don't think we need to rely on anecdotes here. Mortgage interest rates have actually risen on balance, as have corporate bond yields across many risk categories; and in many of these cases, the nominal interest rates are at least as high as or in some cases much higher than they were last August when the federal funds rate was at 5¼. Banks continue to tighten terms and standards for nearly all categories of loans. Equity prices have fallen, adding to the downward pressure on wealth from declining house prices, and I think these developments underscore the very slow recovery likely in financial markets and the possible downside risks relative to even that very gradual improvement that many of us were expecting. The tightening of conditions is damping credit growth broadly defined and will constrain, at least to some extent, spending going forward, delaying the return to trend or above-trend growth.

Thus although uncertainties remain quite elevated, I think we can be a little more confident that the economy will be subject to further quarters of below-trend growth and declining resource utilization. Furthermore, with housing prices still falling fast, inventories of homes still high, and financial markets quite skittish, the downside risks even to a slightly lower central tendency forecast remain high. Greater confidence that output will grow below potential for a time contributes to a little more optimism on my part that inflation will, indeed, come down substantially over the coming quarters. An environment of rising unemployment and declining capacity utilization is not one in which businesses or labor will find it easy to restore real incomes or raise profit margins after the increase in energy prices.

With regard to that increase in energy and other commodity prices and how it affects headline inflation, I like to differentiate pass-through from spillover. I think we can expect pass-through. Pass-through to consumer prices of the higher energy and commodity prices is part of the adjustment process by which demand gets damped and by which consumers realize, unfortunately, the lower real income that they get from the adverse terms of trade. So the fact that businesses are able to pass through higher commodity prices and higher petroleum prices I don't find all that worrisome, provided that they're passing through a one-time increase in prices rather than a continuing rise. I think we have some further evidence that at least to date—things could change, I admit—what we are seeing is a pass-through of a one-time rise rather than some continuing increases. For one thing, commodity prices, as shown in Bill's chart, have flattened out or actually declined in the past few months. So presumably that pass-through is a one-time jump, if that's what they're doing, passing through those prices. Second, I think we saw in the GDP chain-type price indexes that the price of domestic value added increased at an annual rate of only 1.1 percent in the second quarter—which suggests to me that, at least through the second quarter, there was very little spillover from these higher commodity and energy prices to the stuff we produce here at home. Also, labor compensation growth, which could be a lagging indicator, at least to date hasn't increased. If anything, it has slowed a little further, which along with relatively robust productivity growth is holding down unit labor costs. Headline inflation—the goods and services that people purchase—has been high. Energy prices are being passed through, but I think to date there's no evidence or very little evidence that it's spilling over into other prices in the economy. So this is about the adjustment to relative prices. Obviously the decline in oil prices, if it holds, will be helpful on the inflation front, both in its direct effect on headline inflation and its indirect effect on inflation expectations. We finally have evidence of two-way risk in oil prices, and that should make

us more comfortable with an assumption of stable prices as a reasonable basis for forecasting.

Other recent contributors to higher price levels have also become less averse. As I mentioned, other industrial commodity prices have leveled out or declined, and the dollar has been relatively stable in recent months.

Although I feel a little more confident about the expectation of lower inflation going forward, I agree that upside risks still prevail. Core inflation has ticked up. Headline inflation will be high for some time and could threaten to spill over through increases in inflation expectations. Oil and commodity price declines are largely an endogenous response to perceptions of weak growth, and if those perceptions turn around, so will those prices. Longer-term inflation expectations remain elevated by some measures and are probably less well anchored than they were a couple of years ago, before oil and commodity prices rose so much. In sum, I see upside risks to both the inflation gaps and the output gaps as having diminished over the intermeeting period, and we'll get to the implications of that for policy in the next part of the meeting.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. I have no material changes to report in my view on the overall state of financial stability, growth, or inflation; but as I talked about at the last meeting, it still is likely to be a long, hot summer, and we're only about half over with it. I'll talk first about financial institutions—make maybe four or five points—and then turn quickly to the economy and inflation.

First, on financial institutions, I think the body blow that the financial markets and the real economy have taken because of the turmoil at the GSEs is not complete. It is easy for those of us in Washington to forget that bill signings don't always solve problems. I'd say, if the last thing that happens on GSEs is that the bill was signed two weeks ago and action isn't taken in the coming



weeks and months, then I would be surprised if we could get through this period without more GSE turmoil finding its way onto the front pages. Second, in terms of financial market conditions, the fall in oil prices and the rest of the energy complex is, indeed, good news, but it strikes me that it has camouflaged an even tougher period for financial institutions than would otherwise be the case. That is, financial institutions somehow look a little more resilient, but I think part of that is only because of the negative correlation that's developed in recent times between equity prices of financials and oil prices. The financial institutions themselves strike me as being in worse condition than market prices would suggest.

Third, capital raising, as we have long talked about, is essential to the fix among financial institutions. The way I best describe capital raising over maybe the last nine months is that the first round of capital raising, which was in November and December, was really the vanity round. This consisted of very limited due diligence, sovereign wealth funds signing up, issuers relying upon their vaunted global brands, and capital being raised in a matter of days. The second round probably took us to the spring, a round that I'd call the confessional round. [Laughter] In this round, financial institutions said, "Oh my, look at these real write-downs that I have. Look at the need for this real capital raising, and here I'm telling you, the investors, all that I know." But the second and third confessions usually have less credibility than the first. The third round is the round that we're in the middle of, which I think of as the liquidation and recap round, likely to be the hardest round to pull off. It is likely to force issuers of new shares or of new forms of preferred stock to be asking of themselves and their investors the toughest choices. They have to assess the strength and durability of their core franchises. I think that this will be happening in very real time. So the circumstance of an investment bank that Bill mentioned at the outset I don't think will be the sole case of this. This liquidation and recap round is later than would be ideal from the perspective

of the broader economy, but it is absolutely needed. Until we see how it occurs, it's hard for me to be much more sanguine that the capital markets or the credit markets will be returning to anything like normal anytime soon.

Let me make a fourth broad point about financial institutions. Because of these different phases of capital raise, I think management credibility among financial institutions is at least as suspect as it has ever been during this period. Even new management teams that have come in have in some ways used up a lot of their credibility. It would be nice to believe that they have taken all actions necessary to protect their franchises and their businesses, but most stakeholders are skeptical that they've taken significant or sufficient action. At the end of the day, no matter where policy comes out in terms of regulatory policy from the Fed and other bank regulators or accounting policy from the SEC or FASB, it strikes me that those changes in policy are less determinative of how things shake out. That is, management credibility is so in question that the cure is not likely to come from accounting rules or regulators but from the markets' believing that what management says is what management believes and will act on it. As a result, I think that many of these financial institutions are operating in a zero-defect world, which is posing risks to the real economy.

Fifth, let me make a final point about financials. We've all talked a lot about the effect of different curves for housing prices on the financial institutions themselves. I don't mean to give short shrift to any of that, but I would say that the level of uncertainty and associated risks of their non-housing-related assets are now very much a focus. According to July 2008 data, of credit currently being extended by banks, only about 20 percent is for residential real estate. Only about 9 percent is for consumer credit. So that leaves the balance in areas where these financial institutions and their management teams have to be asking themselves whether the weaknesses that are emerging in the real economy will place uncertainty over assets that have nothing to do with

housing. That's a major downside risk for financial institutions and has not been much of a focus of shareholder and stakeholder concerns.

There are two open issues that will guide some of our thinking, at least with respect to these credit markets. First, as we talked about a little last night with the presidents, are the embedded losses so great at such a critical mass of institutions with management credibility so low that many more than currently expected might be unable to survive? This is a question that I'm not sure I know the answer to. Second, despite the concerns about the effect of the credit markets on the broader economy that I talked about, our monetary policy may not be terribly well suited to be fixing those problems, and financial institutions may not be terribly sensitive to the extent we decide that we should change the stance of policy.

Taking all that into account, let me say a couple of words about growth and inflation. First, on the economic growth front, given my views of what's happening in the credit markets, it's very hard for me to believe that the economy will get back to potential anytime soon. There are continued financial stresses that could last through year-end, and in there could be an upside surprise. Still, all things considered, my base case has second-half growth still above staff estimates owing in part to the productivity we've seen in recent months and the remarkable resiliency of this economy. If we look beyond that horizon, though, toward the Greenbook forecast in 2009 and beyond, I must say I don't really see the inflection point to take us back to economic growth of 2.2 percent or whatever the Greenbook suggests. I think we're going to be in this period of below-trend growth for quite some time. My own view is that, when the Congress comes back after its August recess, we will be in the middle of a big debate on "Son of Stimulus" and that the stimulus probabilities have moved up quite materially. However, it is not at all obvious to me that it will do much in terms of helping the real economy. Outside the United States, I share the view of Governor

Kohn, which is that I'd expect global GDP, particularly GDP among advanced foreign economies, our major trading partners, to continue to disappoint, making the remarkable addition of net export growth to our own GDP likely to dissipate.

Turning finally to inflation, my view is that inflation risks are very real, and I believe that these risks are higher than growth risks. I don't take that much comfort from the move in commodity prices since we last met. If that trend continues, then that would certainly be good news; but I must say I don't feel as though inflation risks have moved down noticeably since we last had this discussion. The staff expects food prices to continue to be challenging; that is certainly my view. The staff also expects core import prices to fall rather precipitously. I'm a little skeptical of that view. I think it's possible, but I don't really see the catalyst for that given what we see about changes in input prices overseas and given expectations of the dollar in foreign exchange markets. So with that, I think that the inflation risks are real, and I'll save the balance of my remarks for the next round. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thank you very much. We have now had the first anniversary of all the financial turmoil, and how have the markets celebrated? Well, we have had Freddie and Fannie go down and need one of the largest bailouts. We have had IndyMac go down—the second largest bank failure in U.S. history and perhaps the most costly bank failure in U.S. history. I am talking just in nominal terms; I haven't actually done the real adjustments. Also, we've seen a variety of widening risk spreads. At the last meeting I went on with my standard metaphor of the slow burn and said that things could reignite, and I think we certainly have seen a few things reignite. I very much agree with Governor Warsh with respect to Freddie Mac and Fannie Mae that, although legislation has been passed, the devil will be in the implementation

details. Simply because the Treasury has the capacity to do something, it is not quite clear what it will do or be able to do or how the markets will respond to that. Obviously, Freddie and Fannie have been really the only game in town for mortgage securitization. The jumbo markets have not been working. The subprime market is not there right now. So until and unless we can be assured that they will operate properly, they still have a lot of potential for more flames coming out.

There are also a number of other reasons that I am still concerned about financial markets being very far from normal. One, reference was made to a study that we have done here at the Board that Nellie Liang is taking the lead on. New York has also done a study; I think they used very different methods but came out with similar numbers. The studies say that large losses are still to come and that total losses associated with the challenges that we have been seeing will be on the order of \$900 billion. U.S. and European financial institutions have taken about \$400 billion of write-downs. Not all of those losses will be on financial institutions' balance sheets, but there certainly are potentially more losses to come—not only in mortgages, in leveraged loans, and in commercial real estate but also in the consumer parts of the portfolio and potentially other parts of the portfolio. A fragility is there, which has to be taken into account when we look at capital ratios. If you simply look at reported capital ratios, they are off their peaks of a few years ago. However, if you were to do a more-thorough mark-to-market on a lot of different pieces of the portfolio or if you did have to liquidate—even assuming it wasn't a broad fire sale but just one institution that had to liquidate now and it had no further consequences for anyone else's expectations, which I don't think is accurate—you would see those capital ratios be in fact much, much thinner than they appear in an accounting sense.

A number of people talked about the OIS spreads and said that things seem to be at 50 basis points rather than at 10 basis points. Well, that is true not only in the U.S. dollar but also in the euro and in sterling. If you look to the forward market, that number is increasing. It is not staying the same. It is going up quite a bit, to about 75 basis points over a year period for the dollar to 130 to 150 basis points in sterling and in euro. That suggests a lot more challenges to come. So even if 50 is the new 10, it is still a major challenge going forward. That puts a lot of pressure on banks to generate earnings to make up for the write-downs and other challenges. In the old days, when you could finance yourself at 10 basis points, the institutions were undertaking a lot of activities that would allow them to generate a lot of revenue, even if they kept taking hits in certain parts of their portfolio. But when funding is at 5 times that, or 10 times that, or 15 times that, a lot of activities that once were profitable are not profitable. The margins are much lower, and their ability to earn their way out of this is much, much more of a challenge. I think that is going to be even truer for the European institutions. That is actually one area in which I see it as more likely that an important shoe might drop, not just in the United States but in a major European institution. European institutions haven't been as active in raising capital, and there are more constraints on their ability to raise capital, given the way rights issues work. I think that greater challenges are going to come in the European economies and that the ECB faces greater challenges in dealing with the increasing inflation threat that they have there and worldwide, while being able to provide some policy accommodation.

Third, securitization markets have certainly not recovered. We have talked about that. The infrastructure investment that will be needed for these to come back in terms of data, contract certainty, et cetera is going to take a long, long time. It is not clear exactly how long, but it is clear that recovery will not be right around the corner. That means continuing pressure

on banks' balance sheets independent of all the other capital issues. If they just want to continue on, they have to keep a lot of things on their balance sheets. One bright light, just in case you see nothing positive, is that we were able to put off some very significant changes in accounting—FAS 140 and FIN 46(R). They were on a very fast track to make changes that could have brought literally trillions of dollars of assets back onto balance sheets and would have made it extremely difficult for securitization markets to work. That has been significantly delayed, and I think they will take a more balanced and measured approach. Not only has that been put off, but also the institutions will have more time to deal with it. But this pressure is real. The Senior Loan Officer Opinion Survey couldn't be more crystal clear on the challenges that are there and that are likely to continue to be there. Why is that? Well, as a number of people have mentioned, it is because of challenges on the HELOC portfolios and on the option ARM portfolios and uncertainty about a lot of other pieces of the portfolios. So given my views, I am really glad that the Greenbook baseline has taken on board much more of what was previously a “delayed recovery” alternative simulation scenario, much in line with what President Stern mentioned.

But I continue to see that the situation is quite brittle and that small pressures potentially can lead to large and rapid responses. The “severe financial stress” alternative simulation in the Greenbook is certainly not my central tendency one, but I think that we can't dismiss it too easily because there still could be another—what I have now taken to calling, since I chair the supervision and regulation committee—flare-up with one of my problem children. Many of you know the problems in your Districts, but there are a lot of problems, unfortunately, in all the Districts and around the world. I hope no one will ever hear about the problems that my children are having, but sometimes they do come out. As Governor Warsh said, one way to try to deal

with those is through capital. It is becoming increasingly difficult to do that. In the old days the accounting rules were such that you could take over an institution through so-called pooling accounting methods, so you would not face an immediate write-down of everything to current market values. One challenge we have with the institutions that are likely to be failing over time is that these accounting standards are no longer available, so it is very, very difficult to use the kinds of methods that have been used in the past by the FDIC and other regulators to avoid the IndyMac type of problems. It is quite possible that we will be seeing more people queuing up, and more people pulling money out of accounts, even though they are insured accounts. There has certainly not been a generalized drain from the banking system. There has been a recent shuffling, as President Lacker said. But it also makes a lot of institutions much, much more vulnerable than they have been in the past.

If you look at the “severe financial stress” scenario in the Greenbook, what is interesting about it is that it is relatively benign. For something that is severe stress, the macroeconomic outcomes in terms of GDP and unemployment aren’t that severe because of the policy response—taking the federal funds rate down to  $\frac{3}{4}$  percent. I don’t think we can possibly do that in the current environment. It is not that I think that inflation expectations have become unanchored or are not contained, but I do think that our policy responses are contained precisely because we can’t quite go there. If you look at the “inflationary spiral” scenario, it says that by 2009 the fed funds rate would have to go up to  $3\frac{1}{2}$  percent. I don’t think we are in that or anywhere close to that. But if we had to respond as the Greenbook said to bring the fed funds rate down below 1 percent, I think we would get close to that, and we would be in a very, very difficult position.



We have to be very careful about inflation expectations. I think we have mixed evidence on inflation expectations and inflation, although I am heartened that things do not seem to have become unanchored. Some of both the market-based measures and the survey-based measures have come down a bit, although I think, as Governor Kohn said, that the situation is much more fragile. I don't want to take on board too much comfort from the change in commodity prices because we have seen temporary movements up and we have seen temporary movements down. It is heartening, but I think we have to still be very, very careful on this issue. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin, your swan song.

[Laughter]

MR. MISHKIN. Well, I get one more chance in the policy round. That is the one I am going to really go for. I am sure that people are waiting for it. [Laughter] My modal forecast has not changed appreciably. Clearly, I am very concerned about the headwinds as a result of the difficulty in recapitalizing financial institutions, which Governor Warsh talked a lot about. As a result, I think that we are going to have subpotential growth for quite a period of time.

However, the bigger concern is that I see downside risks as having risen substantially. So let me first talk about the things that are the less worrisome downside risks. I think there are increased downside risks just on the real side of the economy. In particular, the consumer has been very resilient, but I am not as sure that that will be true in the future. We just saw terrible auto sales. It could be just one month, and it could bounce back up. But it could be a precursor to much bigger problems, which would not be completely surprising given some of the other things going on with housing prices and credit restrictions. That is one downside risk. The second is that European growth may have shifted down, and so the kind of problems that we are

experiencing here perhaps are being experienced there, particularly in terms of lower housing prices in some parts of the euro zone. That could mean less demand for our exports, and it would be another negative for economic activity. The third is that we have actually seen a backup in mortgage rates, and that can have a direct effect on housing demand. It is pretty grim when you look at what is going on in terms of housing starts, but it could get worse. It can't go below zero, but it could get worse.

So if that were all there was, I would say that there may be a little increase in downside risk, but it wouldn't frighten me. But I really am very worried about the potential downside risks in the financial sector. I have to disagree very strenuously with the view that, because you have been in a "financial stress" situation for a period of time, there is no potential for systemic risk. In fact, I would argue that the opposite can be the case. Just as a reminder, remember that in the Great Depression, when—I can't use the expression because it would be in the transcripts, but you know what I'm thinking—something hit the fan, [laughter] it actually occurred close to a year after the initial negative shock. In this particular environment, we have to think about where we started. We were very lucky that this financial disruption occurred when bank balance sheets actually were in very good shape initially. You know, thank our lucky stars that it happened at that point.

We are now a year into this. Bank balance sheets do not look very good, for all the reasons that we have been discussing. In fact, they look pretty grim. We have had some failures, and we are concerned about other failures. So we have a very different environment. In that situation, if a shoe drops—and we have had big shoes dropping; we had Bear Stearns, we had the GSEs, and we had smaller cases like IndyMac—and if financial systems are in a very weakened state, really bad things could happen. I think that there really is a serious danger here. In

particular, we could have a dynamic through a decline in demand for housing because of the backup in mortgage rates or other reasons lowering housing prices and that spilling over into the financial system in terms of raising credit spreads, which then lowers demand, and we could get a nasty, vicious spiral. It is exactly one of these adverse feedback loops that we are all concerned about. So this is not off the table, and it very much worries me. I will talk about the implications of that for policy later.

On the inflation front, although I definitely see upside risks, I think they may have diminished just a smidgen. There is a question about how large those upside risks are. In terms of my thinking about what drives the inflation process, it is expectations about future output gaps and expectations about inflation over a long period, not a short-term period. I see absolutely no evidence that, in the last couple of months, we have had deterioration in long-term inflation expectations. If anything, they have gotten a little better since March. If you look at the numbers—and Bill had it in his picture—basically there was some ratcheting up when the crisis first hit. I would argue a lot of that had to do with inflation risk, because there really was increasing inflation risk. There has been a slight movement up—maybe a tenth, maybe you could say two-tenths—in expectations when you look at forecasters.

I am very skeptical of consumer surveys because, exactly what behavioral economics tells us, there is framing. If headline inflation is high, short-term inflation expectations go up, which should happen, but long-term inflation expectations also go up. When headline goes down, then they will come down. There was a nice little article from the San Francisco Fed in one of those little letter deals on exactly this issue, which came up with exactly this conclusion. I recommend that you read it; and the good news is that it takes only four minutes to read because the articles are meant to be very short. So I really do not see that there has been deterioration,

and—I think that this is very important—it is why I stressed the issue of the analytic framework for thinking about the inflation process and what monetary policy can do. We can't control relative prices, but we can do something about long-run inflation expectations and expectations about future output gaps.

So I haven't seen a problem lately that there has been deterioration in long-run expectations. What about output gaps? Well, if anything, they look as though they are expected to widen maybe a smidgen, not that much. We don't have any indication to expect that we will be overshooting in terms of having output greater than potential. Again, that should not be raising inflation. It should, if anything, maybe lower it a bit. Finally, of course, oil prices are lower. I don't think that means that they will stay low because the volatility is huge; but at least the fear that they are going to keep on going up and up and up—so it would not be a one-shot change but would be put into long-run inflation—has, I think, diminished somewhat.

So where do I stand in terms of the upside risk? There still is upside risk because having high headline inflation does have the potential to spill over into inflation expectations. All of us have that concern. But I want to emphasize very strongly that it has not happened yet; I think that is very important. I also think it is very important to monitor this. One concern that members of the Committee have is that we wouldn't react fast enough because we have sometimes been inertial in the past. That is a serious concern. But I think there is a strong argument that, when you have very big downside risks to economic activity, you want to deal with inflation expectations when they actually indicate that there is some problem. And I just do not see that at this juncture. Thank you very much.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. I was advised to speak of things I know, so all of my comments will have to do with commercial banks and the traditional banking operations within those banks. Also, they are limited to the market area that I operated in. I was in a large community bank. The primary competitors were 2 of the top 5 banks and 4 of the top 20 banks. I hope to expand that on the supervision committee.

I guess the major observation I would have is that I can't see lending growth ever resuming until the market for financial stocks improves. That market is not going to improve until it is clear that the credit risk is manageable. I haven't seen the confidence in banking and banking institutions this low since we were well into the S&L crisis back in the early 1990s. At the same time, the credit numbers—or at least the commercial banks' part of the credit numbers—don't look all that bad. At this point, we are sharing those credit losses with a number of other types of institutions, and I think the banks got the better slice of that pie. So I do believe that the banks will be able to manage through this.

On the equity side of things, you have had equity destroyed through credit losses, and so those banks are certainly reducing their lending. I don't think there is enough capital in the system. I don't think earnings are strong enough. There is certainly no external capital available to pick up that slack. So while you hear smaller banks say, "We are getting great business now because the larger banks have cut back on their lending," they just don't have the capacity to take in that business. No matter why they are trying to raise capital, capital issuance is viewed as a sign of weakness. It is scarce. It is expensive. The short selling has been just amazing. It has really driven down the prices. For some of the larger banks, it is running anywhere from 10 to 15 percent of total float. It has even gotten down into banks smaller than \$5 billion. I was looking at one, and the short interest on July 15 was 10 times that of April 15. It was running

about 7 percent of float on a very thinly traded stock. I can't believe that it has anything to do with the fundamentals of the institution. It is just all being painted with the same brush.

For institutions that must raise capital or fail, my concern is that the capital that is being raised or being offered comes with an exit strategy. I don't think that the capital is going to have the patience to wait for a longer-term resumption of lending. Those that do have capital cushions seem to be spending them on small buybacks or dividend increases in an effort to demonstrate some confidence in the future.

On the liquidity side, central core funding is very tight and incredibly uncertain. CD rates do remain high, and as one institution after another desperately needs money, they raise the rates. As one falls out of that situation, somebody else picks it up again. After the full weekend of IndyMac coverage in the press, the phones just lit up everywhere asking about FDIC insurance. Now there is a renewed interest in the CDARS program. I didn't realize that these deposits are classified as brokered deposits. It will be interesting to see if we have a big jump in brokered deposits in the next couple of quarters. The Home Loan Banks are tightening their collateral requirements. They are introducing risk rating systems, so that source of funding is not as available as it was. Nonconforming mortgages are impossible to place.

On the asset side, I talked to several correspondent bankers, and they have been told to cut their overall fed funds lines sometimes in half. It doesn't matter who it is, just cut them in half. A number of the banks are cutting home equity lines across the board and freezing those lines. The full-relationship lending is prized, but even in that it is only to the extent that lending is in some ways self funding. Transaction deals are like hot potatoes; nobody wants to touch them.

We had some calls from other bankers who were asking what liquidity premium we were adding to our pricing, so there is clearly a change in the pricing, which may actually improve profitability. However, I think a lot of it is in order not to turn down the credit but simply to price out the credit, so that the borrower makes the decision not to borrow rather than the bank making the decision not to lend.

On the credit side, the reserve additions have been incredibly dramatic, but a lot of that is because reserve levels were so low going into this. Capital was strong, earnings were strong, but reserve levels were down at 70 or 80 basis points. I had not ever seen them below 1 percent until two or three years ago. That is because of the change in the accounting for reserves as well as 10 years of no demonstrable losses. Oddly enough, the charge-off and delinquency rates really don't look all that bad. When I looked at first-quarter rates, they didn't look a whole lot different from what used to be the norm, at least in terms of commercial loans. Then, on the consumer side, in this case it was mortgage loans versus consumer loans, but still a 75 basis point loss on consumer loans historically was actually normal.

It is really difficult to follow any discussion of what is going on in terms of credit losses because you get confused between what is mark-to-market loss, what is actual credit loss, what are charge-offs, what are reserves, and then who owns those losses. I am not quite sure what the rate of deterioration or the rate of resolution is. In terms of collection, it takes an awful lot of time to ramp up collection and recovery efforts, and I don't know where we are in that cycle, but I think we have a long way to go.

The last cycle was all about commercial real estate, and nobody could work up much sympathy for commercial real estate developers. [Laughter] In this situation, there is so much political sensitivity around foreclosures that I think it is going to be much elongated. When a

borrower cannot or will not pay and you can't restructure it to create capacity or willingness to pay, then some form of forced sale is the only thing that gets you off go. I think that has been pushed out and pushed out. It is also the only way to clear any junior liens. This process is expensive and time-consuming, and owning the property is even more expensive. So as the lender-owned properties become a larger and larger segment of the properties for sale, I do think price declines are going to accelerate significantly.

I will be watching the IndyMac resolution particularly closely. In the last cycle, if you will remember, the properties that were sold by the RTC brought the biggest discounts of all. So it will be interesting to see what this theory of holding off on foreclosures and then at some later point having to move the assets actually does to prices. The good news is that once lenders start selling, they do tend to move units at whatever price it takes. Lenders are going to have to do that. There is no justification for wasting precious capital or liquidity on dead assets. But there is also no justification for selling the portfolios at fire sale prices if the net realizable value of collecting them is higher, and I think it definitely is for the banks.

Finally, if I could take one more minute, I did do some very in-depth personal research on the housing decisions of a relocating worker. [Laughter] I purchased a residence in January '06 for a May '06 closing and hit the peak. The current value, I am told, is 80 to 85 percent of the purchase price, marketing time 6 to 12 months. The purchase in the new location—I did do the calculation—it was 15 to 20 times annual rent, but that didn't matter. I had already had all the thrill of ownership that I could stand and will be renting. [Laughter] The second thing is that, if I had financed this property at 80 percent, I would have had no equity to roll into a new purchase anyway, so there would have been no decision involved. The good news is that as long as there is no need to sell, the price doesn't matter, and I could have waited it out very easily. So the



conclusion that I came to is that this current elevated inventory we have of housing includes only those who absolutely have to sell because nobody in this market would choose to sell. So once that begins to turn around, again, there just have to be a whole lot of pent-up houses for sale.

Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Michelle, what time is our hard cutoff here?

MS. SMITH. We can be pretty flexible. We're okay.

CHAIRMAN BERNANKE. You want it before 2:15, though. All right. Well, I spent a lot of time through the meeting and during the break working up a crystalline summary of the discussion. [Laughter] But I am a bit concerned about getting to lunch and avoiding the 2:15 hard deadline; so if you would excuse me, this time I will just go directly to a few comments of my own, and then we can go to the policy round.

We saw growth of about 2 percent in the second quarter, which suggests a campaign slogan for the Republicans, "The Economy: It Could Be Worse." [Laughter] The question, though, is whether this higher-than-expected growth rate in the second quarter implies that we are actually looking forward to a better-than-expected remainder of the year or whether this was in some sense a last hurrah of borrowing from the future. I feel that I am very strongly in the latter camp, unfortunately. I do think that, for reasons people have talked about, the remainder of the year and into next year are likely to be quite weak. I don't know how weak, but if you look at each component of spending or component of production, you see mostly very negative indicators.

We have talked about consumption. We know about all the fundamental issues that are affecting consumers, and we have seen recently, I think both anecdotally and in terms of the data, some softness, particularly in the auto area. In the labor market, several people have noted

that the loss of payroll jobs has not been as rapid as, for example, in 2001. The unemployment rate, though, has risen as quickly as in previous episodes, and any look at the unemployment rate would suggest that this is something close to a normal recession dynamic.

Housing, of course, remains very uncertain. We don't really know when the bottom will be, although I would add, a point that I think Bill Dudley made, that there seems to be a growing confidence that when we have reached the bottom in housing, whenever that may be, we will see a very quick improvement, both in the financial markets and then, presumably, in the economy as well. In other areas, such as nonresidential construction, architectural billings and other factors suggest slowing there. We see slowing in the other industrial countries, although some strength is still in the emerging markets. So just looking at the traditional indicators of growth and production, I think the best guess is for a slow second half, a slow beginning of 2009, and an unemployment rate that continues to rise from here.

I do believe that the financial stress and its implications for credit availability are important in this whole dynamic. I guess President Lacker and I keep talking past each other, but I don't think that the federal funds rate is an adequate description of the stance of monetary policy. To give another example, in the past we have used money growth as an indicator of monetary policy. If we used that indicator, it would look quite different. I think the appropriate indicators are the rates and terms that are being faced by the people making decisions to spend in the economy. You can go through the entire list, and in every case, as Governor Kohn suggested, the actual rates being faced in the data by borrowers are as high as or higher than they were last summer. Mortgages, which are a particularly sensitive area, are of course critical here. Despite the decline in the federal funds rate, the spread between mortgage-backed securities and duration-matched Treasuries is now about 260 basis points compared with 120 basis points last

summer. In addition, for the spread between jumbo loans and conforming loans, which in the past has normally been between 25 and 50 basis points, the offer rate is about 120 basis points. So there seems little doubt—and we can check with Governor Duke about this—that, despite the lower rate on overnight bank lending, the rates that matter for economic activity are largely higher than they were a year ago. Therefore, I don't think it is evident at all that we are in a financial situation that is conducive to rapid, excessive growth and inflationary increases a priori.

Now, going forward, of course, a lot of what happens in the economy is going to depend on bank balance sheets. I won't spend much time. In April, I talked about the staff's estimates of losses going forward. That has been updated. Nellie Liang is working with people in New York. The numbers are not too encouraging under the baseline scenario, forgetting about the more severe scenarios. The staff now projects about \$228 billion in losses for U.S. banks and thrifts in '08 and '09. That excludes investment banks. That excludes write-downs. If that occurs, it would be about a 2 percent loss rate over the next two years, which would be above the peak of 1991 and 1992. Of course, if the economy does worse, it would be even higher. Relative to that \$228 billion in losses, there are so far loan-loss provisions of about \$68 billion. So it looks as though we still have a long way to go in terms of bank losses and write-downs.

In addition, some of the biggest banks will take very significant hits. This is very preliminary, and I don't want to make too much of it, but the preliminary analysis shows that for five of the very biggest banks, under a baseline scenario and looking at the composition of their asset holdings, their current tier 1 capital ratios will be reduced between 30 percent and 50 percent over the next two years. So there is a real concern about the availability of credit and about the cost of credit. I could go on and talk about a variety of other areas, including the Senior Loan Officer Opinion Survey, which suggests that credit will be a concern going forward.

President Lacker and I have, I hope, respect—I respect him, and I hope he respects me. But we disagree also about President Bullard on systemic risk. I take his criticism to be that it works in practice, but can it work in theory? Systemic risk is an old phenomenon. There are literally dozens and dozens of historical episodes that are suggestive of that phenomenon. There is also an enormous theoretical literature. Maybe it is not entirely satisfactory, but certainly many people have thought about that issue. I, myself, have obviously worked in this area. Clearly, it is not something that we can tightly explain in all aspects, but I do think it is a concern. We need to remain concerned about it. Although it is true, as President Bullard points out, that there is an accommodation and a basis for anticipating crises as we go forward, it is also the case, as I think Governor Mishkin noted, that after a year we are also facing a situation of greater fragility, of much lower capital, and fewer shock absorbers. Those things will make any crisis that much more severe, should it occur. So overall I think there is still significant downside risk to growth. I think the baseline of slow growth is right. I am hopeful that we will see growth restored early next year, but I think it is very uncertain at this point.

On inflation, I do have concerns, as everyone else does. I think that the commodity price movements we have seen are good news. They have been quite significant. Besides oil prices down about 10 percent and natural gas prices down about 32 percent, since the last meeting corn is off 27 percent; soybeans, 17 percent; and wheat, 16 percent. Those are not small changes. Now, obviously, the level of prices is still very high. It has risen considerably over the past year. We will continue to see that high level of prices being passed through into the core, as Governor Kohn noted, but I would argue that if—and this is a very big “if”—commodity prices do begin to stabilize within the general range of what we see now, I think that the inflation concerns will moderate over time because they will have lost essentially their driving force. We don’t really

have the conditions to turn the commodity price increases into persistent inflation, absent continued pressure on that front and absent changes in inflation expectations, of which there is only limited evidence at this point. So I want to be very clear: I think that containing inflation is enormously important, and I think it is our first responsibility. We need to watch this very carefully. I think there will be continued pressures even if commodity prices don't rise, but I do think there is also a chance that we will see a moderation of this problem going forward.

What else? I guess there has been a lot of discussion about the appropriate withdrawal of stimulus. Again, I don't think I accept the idea that we are currently in an extremely stimulative situation. However, if financial markets were to normalize, for example, that would lead to a more stimulative situation. I would like to say just a word about that. That is to say that the speed at which we remove the accommodation—and I think it is clear we do have to do that relatively soon—should depend to some extent on how inflation evolves. Under the more benign scenario that I have just described—if inflation does decline significantly because of commodity prices—I think that we obviously have more time. I would just note for comparison past episodes. In 1994, for example, the pause lasted 17 months, and the first increase in rates came two years after payrolls began growing again. In 2001, again, it was more than a year after unemployment rates started coming down, and payrolls began growing before the rates started going up.

Now, I think there is a view, which is a reasonable one, that maybe in at least the second of those two episodes we waited too long to begin to normalize. That is entirely possible. But, again, it would be extraordinary if we were to begin raising rates without an immediate inflation problem with the economy still in a declining or extremely weakened situation. If inflation does in fact become the problem that many around the table think it is, particularly if commodity

prices begin to go up again or if the dollar begins to weaken, then I will be the first here to support responding to that. I do think it is incredibly important to keep inflation expectations well anchored, particularly to the extent that movements of commodity prices and the dollar seem to be derived from monetary policy as opposed to things like geopolitical risk. Then, I think we can't treat them as truly exogenous. We would have to respond to those things. So I welcome the ongoing discussion we should have about the pace of withdrawal of accommodation. I do think it depends very much on how things evolve, and I do think that our strategy should be to watch carefully and to make the right decisions as we see the data come in. Let me stop there and turn to the last round and ask Brian, please, to introduce the policy discussion.

MR. MADIGAN.<sup>2</sup> Thank you, Mr. Chairman. If you prefer, in the interest of time, I can cut back my remarks to focus just on the policy statement and not the general background. I will be referring to the version of table 1 included in the package labeled "Material for FOMC Briefing on Monetary Policy Alternatives." This version incorporates some small revisions from the draft that was included in the August Bluebook. The table presents two policy alternatives. Under alternative B, the Committee would maintain its current policy stance at this meeting but in its statement would underscore its concerns about inflation. Under alternative C, the Committee would firm policy 25 basis points today and issue a statement indicating that the action was taken to better balance the risks to growth and inflation; the statement would be noncommittal about whether further rate increases were imminent.

The language proposed for paragraph 2 of alternative B has been modified a little from that proposed in the Bluebook. Most important, the first clause is now in the past tense, referring to economic growth in the second quarter, thus avoiding an implication that the economy is continuing to expand in the current quarter. In a change relative to the June statement, exports as well as consumer spending are cited as factors that supported growth. Also, the sentence beginning with "over time" has been moved up from the risk assessment paragraph. That shift is likely to be seen as underscoring a view that policy is currently positioned to foster a gradual resumption of moderate economic growth, suggesting that further easing is not likely to be forthcoming. That sense may also be reinforced by the omission of the phrase "to date" after "easing of monetary policy." In paragraph 3, the inflation discussion for alternative B gives slightly greater emphasis than in June to the Committee's inflation

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

concerns, partly by starting with the flat statement that “inflation has been high” and by giving less prominence to the expectation that inflation will moderate. The slight change to the final clause in paragraph 3 is proposed for purely stylistic reasons. In paragraph 4, the first sentence of the risk assessment states that “although downside risks to growth remain, the upside risks to inflation are also of significant concern to the Committee.” While this sentence does not provide any explicit weighting of the two risks and does not suggest that policy firming is imminent, the statement as a whole probably would be read as giving a bit more emphasis to inflation concerns and a bit less to growth concerns than market participants now expect. Thus, even though the absence of a rate action today would be consistent with market expectations, the statement would likely be viewed by market participants as a bit more hawkish than they anticipated, and market rates could rise modestly in response.

Turning to alternative C, concerns about upside risks to inflation could motivate the Committee to begin firming the stance of monetary policy at this meeting. The first three sentences of alternative C, paragraph 2, are identical to those of alternative B. However, the final sentence differs, partly by indicating explicitly that the Committee sees the current stance of monetary policy as accommodative. Also, by dropping the phrase “over time,” which appeared in paragraph 4 of the June version, the Committee would suggest that it sees moderate economic growth as resuming sooner rather than later. In paragraph 3, the Committee would still note that inflation is expected to moderate but, in the last sentence of the paragraph, it would explicitly cite the risk—and note its concern—that inflation might not fall as expected. Finally, the risk assessment, paragraph 4, would indicate that the Committee firmed policy today in order to better balance the upside risks to inflation and the downside risks to growth. However, the statement would avoid an explicit judgment about whether the risks were now balanced and would provide little information about whether further tightening was imminent.

Even though the wording of the statement for alternative C would not indicate that policy was now on a steady firming march, market participants would likely conclude that the firming process had been accelerated considerably relative to their expectations. With the Committee having tightened amid bad news about financial institutions and in the immediate wake of the implementation of a number of additional Federal Reserve liquidity initiatives, investors would likely conclude that the Committee did not see financial stability considerations as raising a barrier to further policy tightening. They would view the Committee as adopting a more aggressive posture toward inflation. Because it has been historically rare for the Federal Reserve to implement a one-off tightening, investors would likely see fairly steady rate hikes over the course of future meetings, and thus short- and intermediate-term interest rates would, in all likelihood, move up sharply after this action. Yields on longer-term fixed-rate mortgages might rise particularly substantially, as premiums for interest rate and prepayment uncertainty increased and as mortgage investors hedged the increase in mortgage durations. Such a development could adversely affect the prices of financial assets that are closely tied to housing markets and mortgage performance. However, yields on long-term Treasuries could decline,

particularly if market participants marked down their expectations for economic growth and inflation.

CHAIRMAN BERNANKE. Thank you. Any questions for Brian? President Fisher.

MR. FISHER. In terms of the wording in paragraph 3, if we do not raise rates, I am wondering why the second sentence that is now in alternative C wouldn't be more appropriate for alternative B, and I am wondering what your thinking is about that. In other words, if we don't take action, that seems to be a more emphatic statement than what you have currently, assuming no change in rate—"The Committee expects inflation to moderate later this year and next year," et cetera—whereas if we are trying to send a signal that we are really concerned and we do not change rates, why wouldn't we have used, "Although the Committee expects inflation to moderate . . . the possibility that inflation may fail to decline as anticipated is of significant concern"? Then, maybe take the word "also" out of the fourth paragraph. It just seems to me odd that if we act and describe the risk after acting, the language is even stronger. Whereas if we don't act and we want to emphasize that we are remaining vigilant, why wouldn't we use that stronger language? I am curious as to why you chose the two or what you feel the tradeoff is there.

MR. MADIGAN. I would say, President Fisher, that the substitution that you are suggesting seems plausible to me, but I would also say that the first sentence of alternative B already does suggest some pretty significant concerns about inflation.

CHAIRMAN BERNANKE. All right. Any other questions? Let me start, then, with President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I favor alternative A—no change in the funds rate and a balanced assessment of risks designed to leave market expectations concerning the path of the funds rate roughly unchanged. Oops, I made a mistake, there is no A. [Laughter] So



I propose to create it by changing the wording of the first sentence of alternative B, paragraph 4, to read, “Both downside risks to growth and upside risks to inflation are of significant concern to the Committee.” As it is currently worded, B(4) downplays the downside risks to growth, which have intensified since our last meeting as the credit crunch has worsened and emphasizes inflation risks, which have moderated slightly as oil prices have fallen. The assessment of risks in alternative B, as it stands, is unbalanced and—as Brian just pointed out and the Bluebook does also—is more hawkish than the primary dealers and most market participants generally expect. So it is likely to shift the fed funds futures path and other interest rates upward.

I see no case, at this juncture, for signaling that we are likely to adjust policy upward before the end of the year. Indeed, there is a non-negligible probability, to my mind, that the next move will be down and not up. There is already significant slack in the labor market, and with the economy expected to grow at a near-recessionary pace in the latter half of this year, the unemployment rate is poised to rise further. This growing slack is working to contain inflationary pressures as evidenced by the stability and low level of wage growth. I expect that growing slack will continue holding down wage inflation going forward. Long-term inflation expectations seem relatively well contained, and core inflation has been stable for the past several years. Finally, a major component of the surge in headline inflation—oil price increases—has finally started to show some sign of reversing direction. Although the real funds rate remains quite accommodative by the usual metrics, we are clearly not in a business-as-usual situation. We are in the midst of a serious credit crunch that has, again, worsened during the intermeeting period, as exemplified by the developments at Freddie and Fannie and the other things that many of you have pointed to in our last round. We are likely seeing only the start of what will be a series of bank failures that could make matters much worse. Given these financial

headwinds, it is not clear to me that we are accommodative at all; I agree, Mr. Chairman, with the comments you just made on this matter.

Given my preference for an inflation target of around 1¾ percent and equal welfare weights on the inflation and unemployment gaps, I view the Greenbook policy path and forecast as a roughly optimal trajectory to the attainment of our goals. Although core inflation exceeds the level I consider consistent with price stability, unemployment also exceeds the level consistent with full employment. Given our dual mandate and a forecast that envisions a growing unemployment gap, coupled with declining inflation under the Greenbook funds rate path, I see no case for jolting expectations in such a way as to, in effect, tighten policy now. I feel especially strongly about this in view of the major downside risks to the economy from an intensifying credit crunch.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. A funny thing happened at my board meeting the other week. I was all set to prepare them not for a rate change recommendation this time but for one in the not-too-distant future. By the time I was done, they were asking what the procedure was for dissenting from my recommendation. So, in fact, they forwarded a recommendation for an increase this time around.

You know, we can disagree over the inflationary consequences of a lot of this, but I think there is a message from around the table and the public, our directors, and whatnot, that they do feel that there is a concern about inflation. So I favor alternative C, although I recognize the reality of today. I am struggling with the fact that we lowered the funds rate rather aggressively, and things have worked out much better than we expected against the risks that we thought that we were facing. We could disagree over that as well. I do take the point that uncertainty is very

high at the moment. But I think that we will need to increase rates sooner than currently expected by markets. We are counting on a modest degree of slack and our credibility with the public to keep inflation and inflation expectations contained while we leave rates on hold. But I am concerned that there will be only modest inflationary restraint from the slack that we see and that we may not be able to convince the public that they shouldn't worry about high headline inflation.

I certainly agree that bank balance sheets were pretty good in 2007, but I am concerned that headline inflation has been above core inflation for quite a long time. I am not sure our own balance sheets would reflect that. So by following a wait-and-see strategy, we are accepting a large baseline inflation risk. In addition, there is an enormous tail risk—that is, a return to much higher underlying inflation. Also, I was a little concerned to see in the dealer feedback to the TAF extensions that some market participants think that we will not increase the policy rate as long as we keep the “unusual and exigent” determination in place. I am not sure that is a good expectation for them to have. Fundamentally, it is my opinion that there has been a change in the balance of the economic rationale and risk-management calculus that we used to lower the funds rate to 2 percent. It is not a huge change, but I think there has been a change. One year on, the economy has withstood the financial shock in a resilient fashion, especially given the add-on shock from oil. I don't know what more we could have hoped for from the vantage point of the fall of 2007 and the losses that have been taken.

I think the odds of preventable negative feedback loops that we took out the last 75 basis points of insurance against are somewhat smaller than they were five to six months ago. Part of our earlier logic to appropriately lower rates to a decidedly accommodative policy stance was to guard against disorderly market conditions that might permanently damage our financial market

infrastructure and destroy the financial capital stock in a real, productive sense the way that I think President Plosser was alluding to. But real forces have unmasked dramatic weaknesses and faults in our financial system, and markets will be evolving to a new intermediation structure. Our policy can ease transitions only to a degree, but it cannot restore the previous financial status quo, nor should it be aimed at doing so.

During the transition, I would not be surprised if we revisit periods of market volatility as the disadvantaged players are repeatedly challenged to restructure to the new environment. Counterparties are shying away from previous financial partners, in part because of uncertainty over the risk–return profiles and the transitioning industry structure. These profiles involve both liquidity risk and credit risk. I think our lending facilities allow a modest decoupling of the fed funds rate setting to deal with this. In my view, the balancing of current risks calls for increasing the funds rate in the range of 50, maybe 75, basis points within some reasonably short period of time. If events change importantly, I would certainly advocate further adjustments in either direction, depending on how those risks adjust. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. I would just note on the “unusual and exigent” issue that there are two schools of thought. The other school is the one you said, which is that having done this, we would have the freedom to raise rates; so I think it sort of cuts both directions. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. In the interest of time, I will be very brief. I support alternative B in substance and concur with its wording. I think we are in a delicate rhetorical balancing act at this stage, and as Brian described, the slightly greater emphasis on inflation is appropriate at this time. I think alternative B has substantially captured the current situations and concerns of the majority of the Committee, so I support alternative B.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. I appreciate the fact that reasonable people may differ, and I do differ. In saying that, I am not advocating a tight monetary policy. I am advocating a less accommodative monetary policy. I recognize Governor Kohn's point that relative prices are adjusting, and others have made that point. I think around that context is the fact that we are seeing a systematic increase in the price indexes, both total and core, and I don't think we should ignore that. Now, the core is creeping up, but up nevertheless, and it is systematic in my view. I would feel more comfortable that it was transitory if policy were not so accommodative, which affirms the likelihood of further increases in inflation going forward. That is really where I am focused, I guess is the way to say it.

We introduced the policy that we have, as I think others mentioned, as an insurance policy early on, when we were more in an immediate crisis. I don't negate or minimize the tension that we are under, but I do think we have become very accommodative in our policy with negative real rates. So here we are with this insurance. We have this subpar growth. The subpar growth is not going to go away soon, so we are delaying removing the insurance policy. I worry about that. I think in the long run that does increase the risk of an inflationary problem of a sizable magnitude later on. I know we have this immediate problem, but our role also is to take a long-run view, and I think we would be wise to raise the rate now modestly. It would still be an easy policy. The effects of that increase might be disturbing to the markets. On the other hand, it might actually give more confidence to the markets that inflation is going to come down because we are going to insist that it does. I think there would be some good effects from that. So that is where I am coming from on preferring that we move rates up slightly at this point. Thank you.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I am going to make my remarks a little shorter here. My judgment is that the current situation is a difficult one for the Committee. Because of the very appropriate focus on financial market turmoil over the past year, our attention has naturally turned away from keeping the level of interest rates consistent with longer-term inflation objectives. This was done to avert particularly extreme, but low probability, outcomes in which the economy would experience an especially severe downturn. As it turned out, the bad state did not materialize, which I think will go down in history as a successful element of the Committee's policy over the past year. The ability to take on financial market turmoil of this magnitude and prevent it from doing substantial damage to the economy—a recession of the magnitude of 1980-82, let's say—has been a real achievement. In that sense, all has gone according to plan. At the same time, we have moved interest rates to a very low level in the context of rising inflation and rising inflation expectations. A severe downturn was unwelcome, to be sure, but it was also projected to keep inflation in check. Since that did not materialize, we are left with low rates and an environment of CPI inflation running at 5 percent headline, measured from one year earlier, and long-term inflation expectations creeping higher. We face more risk now of creating a serious inflation problem than we have in a generation.

To make progress, I think we should keep rates steady today but with the plan of preparing markets for an increase in rates at the September meeting, conditional of course on incoming data. This would be consistent with alternative B today; and with intermeeting statements, it would move probability mass toward higher rates through the fall and through the first half of 2009. I have several remarks on a fall tightening campaign. First of all, moving 25 basis points is by itself not likely to have a large effect on economic activity, nor does it bring the

level of the federal funds rate high enough to have a meaningful effect on inflation. The FOMC started tightening in mid-2004 but achieved a core CPI inflation rate below 2 percent in only one month during the entire three-year period of 2005, 2006, and 2007. What the move would do is get the Committee started on returning interest rates to a more normal level, a level more consistent with our inflation objectives. The Committee could pause or even reverse course should particularly adverse data suggest that economic activity was weakening substantially. Preparing for an increase in rates means that we would be signaling that financial market turmoil is no longer the paramount concern. On that, I think we can reasonably stress that we have provided accommodation over the past year in the form of lower interest rates and innovative liquidity facilities. We have bought time for financial firms to repair and adjust. While all is not as it was, we do not want to create an inflation problem in the aftermath of a shock of this magnitude, which may actually compound the situation and make it worse.

Longer-term inflation expectations have been creeping higher, a fact that has been widely cited in commentary on monetary policy. I would like to stress that, in my view of a well-functioning inflation-targeting regime, these inflation expectations would not be moving at all. Short-term interest rates would be moving higher and lower in response to shocks to the economy, and inflation expectations would never move. This would reflect the confidence that the central bank's short-term interest rate adjustments were being accomplished in just the right way to offset disturbances buffeting the economy. Because of this, I prefer not to interpret observed movements in inflation expectations as evidence of what we should or should not do with respect to interest rates. The short-term interest rate would have to move to offset the shocks to the economy even if longer-term inflation expectations never moved. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Kohn.

MR. KOHN. Thank you, Mr. Chairman. I support keeping the federal funds rate at 2 percent for now. I think that is consistent with bringing inflation down over time. I agree that we're going to have to tighten at some point. I agree with your analysis, Mr. Chairman—I don't think we have a highly accommodative policy right now. Not only would I cite the interest rates that you cited, but I would cite the behavior of households and businesses, which aren't acting as if they're looking at very low real interest rates by making purchases of durable goods, capital equipment, et cetera. The cost of capital is not perceived to be low right now, and I think it's for the reasons you cited.

In my view, over the intermeeting period the inflation risks have narrowed just a bit. The damper on inflation risk comes from the decline in oil and commodity prices, the steadiness of the dollar, and my perception that we can count on a more negative output gap going forward, which will provide some discipline on prices and wages. This is a difficult situation. There are no ideal outcomes when you have this change in relative prices. We will have to live with higher inflation and higher unemployment temporarily. We have to keep our eye on the second-round effects, not just the pass-throughs but the spillovers, and I think so far so good. That's a tenuous situation, I agree, but my read of the incoming information is that we can be a little more patient than we thought we could be six or seven weeks ago.

As for the wording of the statement, I could live with President Yellen's rewording, but I think that this language Brian suggested is okay as well. I'm actually not sure how the markets will react to this. Some of the commentary I read over the last couple of weeks thought that we were tilted toward inflation last time because of the way we worded things. I don't think that the market reaction will be large to this, and I agree that the first choice would be not to change market



expectations substantially. I think they're aligned pretty well right now, but I think the reactions will be small, and I can live with the alternative B wording. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Pinalto.

MS. PIANALTO. Thank you, Mr. Chairman. As I indicated in the earlier go-round, I found the balance of risks to economic growth and inflation to be essentially the same. So other things being equal, I might prefer to have risk assessment language that is even more balanced than the risk assessment language that is presented in alternative B. But I have a tactical reason for wanting to see words that express a stronger concern about inflation risk. I do, as I said earlier, expect inflation to worsen before it improves. In particular, as we have been discussing, the core statistics are likely to worsen notably during the next several months, and I could just shrug those worse numbers off because I have a projection that calls for those numbers to improve by early next year. But I'm not confident that the public will shrug them off. As we have been talking about, the cost of longer-term inflation expectations drifting up is large. I believe that we can influence those expectations, and I think it is important that we do let the public know that we are serious about opening the doors to a rate increase if that becomes necessary. We need the flexibility to move nimbly, and I think the language that is contained in alternative B puts the markets on notice. I think alternative B enables us to hold our present strategy of watchful waiting, but it does call somewhat greater attention to inflation risks than we expressed at the conclusion of our last meeting. So I find both the strategy and the language of alternative B to be quite appropriate for the circumstances we face today. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Stern.

MR. STERN. Thank you, Mr. Chairman. I favor alternative B and the language as displayed here. Let me say a few words about the issue of withdrawal of accommodation, which

I've been giving thought to and will want to give more thought to over time. Earlier today I talked about the Greenbook forecast and indicated that I found it credible. But another virtue of it, even if you don't find it that credible, is that the cards are on the table. I mean, it has a path for the federal funds rate. It has a path for the foreign exchange value of the dollar and so on and so forth. Two of the key elements, as I indicated earlier, are, at least over the near-term to intermediate-term, that real growth is subdued and that headline inflation abates after the current quarter, and I think that's relevant. Given the current stance of policy, I think we are well positioned for that subdued pace of real growth. Indeed, even if we get contraction for a quarter or two, I would argue that we have maybe not entirely but largely already addressed that.

On the inflation side, it seems to me that the key part of that forecast is the diminution of headline inflation starting in the fourth quarter. What that means as a practical matter is that in November, December, and January, when we get those data, we'll get confirmation that it is either happening or it's not. Now, assuming that there are no major, decisive surprises between now and then—and that may be heroic—we'll get confirmation of whether that inflation outlook was the accurate one. If we do, then it seems that the path of the funds rate inherent in the Greenbook looks as though it could be acceptable. If we get disappointments on headline inflation for whatever combination of reasons, it calls into question, at least in my mind, that path for the funds rate.

Thank you.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. For my part, our exchanges have in the past been predicated on nothing but the utmost respect. I expect that to continue. If I have done anything or said anything to contribute to any other impression, I regret it, and I apologize.

CHAIRMAN BERNANKE. That wasn't my intention, President Lacker.

MR. LACKER. In the interest of avoiding talking past each other, let me say a bit about why I view real rates as low. I recognize what you and Governor Kohn said about other interest rates. But when I look at the low real rate now and at times in the past when it has been low and I look at things like corporate borrowing rates then, they didn't fall nearly as much as the fed funds rate. If you plot them by lining up the NBER dates, it doesn't look as though what's happened now with those borrowing rates is out of line with past experiences. So if we think now that real rates were low in '03, I'm led to conclude that I ought to think that they are low currently.

Another way of saying this is that spreads always go up in recessions. We drive real rates down in recessions. If consumers and businesses were spending with frenzy now because of low rates, to me that would be a reason that we have to raise them, get them up right away. You know, my sense of the economics of why we push real rates low in recessions is that the state of aggregate demand needs it. It's exactly when consumer and business spending is sort of moribund that we have real rates low. I'm not sure that the fact that it's moribund tells me whether they're low or not relative to where they ought to be. That's how I think about that evidence, but I look forward to being enlightened further in the future on this.

CHAIRMAN BERNANKE. You raise a good point—that we ought to look empirically at the relationship between borrowing rates and the federal funds rate in this episode and other episodes, which we really haven't done. So we need to do that. Thank you.

MR. LACKER. I'll dispense with the rest of my prepared remarks and just say that I recognize the real risks ahead of us. We've experienced sluggish growth, and all the downside risks to growth that have been enumerated are very tangible and very plausible right now. I think we should hold off raising rates at this meeting, but I'm very concerned about the inflation risks. I find myself leaning toward a tightening campaign earlier rather than later, and I'd like to see the

statement do what it can to prepare markets for that. I liked the first version of alternative B, the one without the word “also.” I think “also” damps the concern about inflation. It kind of makes it a little too balanced for my taste. I’m also concerned—I should say “broadly”—that we seem to have left the impression over the past several months, since the beginning of the year, that our concerns about inflation fluctuate. I agree with President Bullard. What we ought to view as ideal is an equilibrium where inflation expectations are rock solid and don’t change and, moreover, that people don’t perceive our concerns and worry about inflation or the weight we’re giving in policy deliberations as shifting from time to time. So that’s an aspect of our communications that concerns me. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. President Rosengren.

MR. ROSENGREN. I support alternative B. I would actually prefer President Yellen’s language but definitely believe that we should have the word “also” in there. Tightening at this time would sap more strength from an already weak economy, and should the forecast look like the “severe financial stress” scenario or the “typical recession” scenario, it would be extremely poorly timed. If the data indicate that inflation is not ebbing as I expect and the economy is on a surer footing than I fear, then it would be appropriate to begin what is likely to be a series of increases in the federal funds target. But the data to date don’t indicate that, so I support alternative B.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Well, Mr. Chairman, I’m already out of the closet in terms of my economic proclivities. I realize it’s awkward for some folks, but I haven’t heard enough today that would change my view that we are running an over-accommodative monetary policy. I agree with your point very much that the rates and the terms being faced by those who drive the economy count. As to Governor Kohn’s point that some of these key rates have not come down, I think that has more to

do with risk premiums, and I hate to see it migrate toward inflation premiums, which I believe is a significant risk. I'm obviously driven by what I hear from my contacts, although I respect the analytics you mentioned, Governor Mishkin. My long-run thinking is as conditioned by globalization as it is by domestic policy, and I just still have a great concern about the wage-price spiral that's taking place in some of our manufacturing centers in the developing countries.

I think it would be wise, just to shift my analogy here and think in canine terms, to take a newspaper across the snout and call for a 25 basis point increase. We're always talking about tightening at some point. I think it just becomes increasingly difficult to take that first step. I grant you that the economy is weak. The financial situation is brittle. That hasn't changed in my view, but the inflationary behavioral patterns that I'm beginning to hear about reinforce my concern about an updrift in the core and the headline data. So I apologize, it perhaps is being a little too strong to say that we've become unmoored or that maybe we are no longer anchored. I think that is nonetheless a real perception. I'm going to vote against alternative B and for alternative C. I may be a minority of one, but perhaps I'll be a sea anchor, if you understand the sailing analogy here, and assist the process of our commitment to be focused on inflation as a risk just as we focused on downside risk to growth. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. As you can imagine, as we've discussed, this meeting presents a difficult policy position for us—and for me in particular. I think we must pay careful attention to the financial market volatility; and to the extent that it has consequences for the real economy, I'm certainly sensitive to that concern. I had a similar experience with my board of directors that President Evans did. I went into my board recommending no change and got considerable push-back in discussion about how we dissent and what the consequences of doing

that are. They are concerned about inflation, and I'm concerned about our mandate to keep longer-term and intermediate-term inflation in check.

We're unlikely, in my view, to get confirming or convincing evidence about whether expectations have become unanchored until well after the fact. I agree there has been very little wage-price pressure to date. But that will be the last shoe to drop in this sequence of raising expectations, and by the time we get to that, I'm afraid it will be too late. I think in the near term we might see some relief in headline inflation; but as has been discussed, whether that will persist is highly dubious.

My real concern is that I believe that monetary policy is accommodative, and with all due respect, Mr. Chairman, when I look at the data comparing the levels of borrowing rates of consumers and businesses, both the levels in real and nominal terms and the spreads, what we see in this period looks remarkably similar to what we've seen in lots of other recessionary, slow growth periods. So, again, following the analogy that President Lacker was using, I see this period as less atypical and more typical of what we see in slow-growth periods. I think it's important that we begin to prepare the markets for an impending shift to a tighter policy. I agree with President Hoenig. The request here is not for tight policy but somewhat less accommodative policy; and if we choose to go with no funds rate increase today, I think the language must help prepare the markets going forward.

I'm pleased with a lot of the discussion around the table. We are actually beginning to talk, I think, about what our exit strategy is going to be from this. I think it's very important to have those conversations, and I appreciate them. I, too, share the observations that President Evans had about talking with people who say, "Well, we can't possibly remove accommodation until we get

rid of the facilities.” I think that is wrong. As you said, Mr. Chairman, actually having the facilities might make it easier for us to correct monetary policy, and I think that’s very, very important.

I guess my bottom line is that I can accept leaving the funds rate unchanged today as long as our language is sufficiently strong about inflation. To that end, I was actually a little more comfortable with the draft table 1. I didn’t like the addition of the word “also.” I thought that weakened the statement. I would prefer paragraph 4 without the “also.” I also have one other, minor observation about paragraph 3, and that’s the first sentence, which says that “inflation has been high, spurred by the earlier increases in the prices of energy and some other commodities.” Well, I think that’s partly true, but I’m concerned that somehow it conveys the impression that the problem with inflation is oil and commodities, when in fact more correctly my concern about inflation is not just oil. My concern is about the stance of policy. So I would put on the table the possibility of saying that “inflation has been high, partly spurred by high oil and commodity prices” to say that it’s more than just the short-term behavior of commodity prices. I think the word “also” means that inflation concerns there are added as an afterthought, which is my reading of the change from the draft table 1 to paragraph 4. So I prefer that “also” be eliminated. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. I’ll be brief. I favor alternative B as written and presented. I think it strikes the right balance by highlighting the risks that we see on the inflation front, and I agree with Brian’s characterization that the capital markets’ reaction might be a little surprise. It is hard for us in a time like this to predict exactly how the capital markets are going to interpret this, but it wouldn’t surprise me to see some initial market reaction that is ostensibly negative. That doesn’t trouble me too much. Ideally, the removal of policy accommodation, which

we talked about today, would be from a position of strength not weakness, but we may or may not have the luxury of waiting for that opportunity. Finally, I think it's important over this period that we not be perceived to be lurching. I think alternative B strikes the right balance of explaining our concerns and provides us reasonable optionality—that is, as you've described previously, state-determined rather than time-determined. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Kroszner.

MR. KROSZNER. Thank you. I support no change, alternative B. As I mentioned before, I don't want to put the commodity price decreases and energy price decreases in the bank and say we don't have any problems going forward. But we also can't ignore them, and I think that does take off a bit of the pressure. It also manifests itself in some of the survey numbers and some of the market-based numbers in terms of expectations. So I think it allows a little more time, as someone said earlier, to be patient, to make the determination, given that I still think there are some very real downside risks, as I've mentioned.

I think this type of statement will be largely consistent with market expectations, although I do think, and Brian can correct me, that this is one of the first times that we have made a very clear statement such as “inflation has been high.” I think that's a bit of a change from where we have been. That's a much stronger acknowledgement of the inflation situation, which I think is appropriate to be acknowledging. But I do think that it may send a relatively strong signal to the market, and it makes me feel more comfortable about no change today with the statement because it shows a lot of concern about the level of inflation in actually characterizing it as high. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Mishkin.



MR. MISHKIN. Thank you, Mr. Chairman. Just let me talk a little about monetary policy, and I'll be brief there. But then I have to use my opportunity to raise some issues for the Committee when I'm not here. I do support alternative B. As is obvious from my earlier discussion, I believe that the risks are balanced. I have one modification to Janet's language because I think it is just simpler to say that "the downside risks to growth and upside risks to inflation are of concern to the Committee." I don't see the need for "both," but we're actually on the same wavelength in terms of this issue.

What I'd like to spend some time on—because I feel this is sort of my swan song, but maybe because I'm a classy guy, I'll call this my "valedictory remarks"—are three concerns that I have for this Committee going forward. I'm not going to be able to participate, but I have a chance now to lay them out. The first is the real danger of focusing too much on the federal funds rate as reflecting the stance of monetary policy. This is very dangerous. I want to talk about that. Second is that I think it's absolutely critical that we keep our options open in the current circumstances, and so I want to talk about that. The third is on the communication issue, but it's not going to be on inflation objectives. I've already talked about that enough in public, so it's clear to you one way or the other. I hope you consider it, but that's something that I don't need to go into here.

First of all, let me talk about the issue of focusing too much on the federal funds rate as indicating the stance of monetary policy. This is something that's very dear to my heart. I have a chapter in my textbook that deals with this whole issue and talks about the very deep mistakes that have been made in monetary policy because of exactly that focus on the short-term interest rate as indicating the stance of monetary policy. In particular, when you think about the stance of monetary policy, you should look at all asset prices, which means look at all interest rates. All asset prices have a very important effect on aggregate demand. Also you should look at credit market

conditions because some things are actually not reflected in market prices but are still very important. If you don't do that, you can make horrendous mistakes. The Great Depression is a classic example of when they made two mistakes in looking at the policy interest rate. One is that they didn't understand the difference between real and nominal interest rates. That mistake I'm not worried about here. People fully understand that. But it is an example when nominal rates went down, but only on default-free Treasury securities; in fact, they skyrocketed on other ones. The stance of monetary policy was incredibly tight during the Great Depression, and we had a disaster. The Japanese made the same mistake, and I just very much hope that this Committee does not make this mistake because I have to tell you that the situation is scary to me. I'm holding two houses right now. I'm very nervous. [Laughter]

The second issue is that it's absolutely critical that we keep our options open. This relates to the points that I already made in my discussion—I argued that we don't know where this situation of financial stress is actually going to head and that the potential for shoes dropping and bad things happening out there is real. I think it's likely that it won't happen, but it's a significant probability with very serious negative consequences. In that situation, we don't know exactly the direction of where we have to go. I was actually very pleased with President Evans's comments. Charlie has been a good friend for a long time, and he is one of the people I have tremendous respect for as an economist. Although we had a disagreement in our view of monetary policy today, on the issue going forward I was pleased to see that you actually indicated that there is a possibility—we hope it doesn't happen, by the way—that things go south and that we actually have to be much more aggressive on monetary policy and on liquidity issues. I know that there have been some concerns on the Committee about that as well, but no option should be taken off the table if bad things happen, and we cannot get boxed in. I feel very, very strongly about that.

I would also say that the same issue comes up in terms of inflation. I have argued very strenuously for nongradualism in a situation like the one we're in. We are in a different world when we are in a situation of financial stress, and it's very possible that we might have to raise rates very quickly. There's a good news case and a bad news case. The good news case is that housing prices stabilize. That could actually turn things around very quickly. I think, Bill, if I'm not incorrect, you mentioned that possibility, and I think you're absolutely right. In that kind of situation, our policy would become very accommodative. I do not think it's too accommodative at all right now. I think it's balanced; it's appropriate. But if the financial markets improve, it will become much too accommodative very quickly, and we then have to respond very quickly in order not to have inflationary consequences. I'd like to see that happen, by the way.

The other case, which I would not like to see happen, is that inflation expectations get unhinged. I have seen no evidence that long-run inflation expectations have gotten unhinged, but there is substantial risk. If that happened, we would also have to move up very quickly. So I really implore this Committee to keep your options open. Do not get boxed in. Let's hope and pray—let's all get around in a circle and hold hands—that oil prices fall, which will also help us not get boxed in. Don, I told you I was going to be a little colorful. He was waiting for this one. I should mention that Don was actually at a conference where he talked about constraints on people's behavior as a result of the transcripts being recorded, and he said, "But not Rick." [Laughter]

The third issue is something about which I am less constrained, which is communications. I would not have talked about this earlier, but it really does worry me. We have a complicated governance structure in this Committee, which I actually think is the right governance structure. We have two types of groups that vote on this Committee. We have the people who are Presidential appointees and then confirmed by the Senate, who are Board members, and I will soon not be one of

them. I'll be a civilian again. Then we have Bank presidents, who are much more tied into the private sector because your boards of directors, which are composed of private-sector people, recommend you. Then we do have some role, but they're the primary people who decide who becomes a Bank president.

I think that's a very good framework. It actually serves us very well. I've been on both sides. I've been on the other side of the fence, not as a president but as an executive vice president. It serves us very well because we have a link to the private sector that we normally would not have; importantly, it keeps us real in terms of information; and there's a group of people out there who are not in Washington or New York (because people also have a hard time about New York) but who tend to be very important supporters for us politically. So this is a system that I would very much like to see preserved. It does have a problem because of the different roles here. What I have been very concerned about—and I have had people in the markets speak to me about this—is that recently I had a very prominent central bank governor say to me, “What in the hell are you guys doing?” The issue here is that we need to have a situation where Bank presidents and also members of the Board can speak their views. They may have different views, and I very much encourage that in terms of discussion, of where they think the economy is going, which is what we do inside; and I think that does need to be done outside the Committee because it shows that there are different views, that we're thinking about it, that we're trying to learn from each other, and so forth and so on. What is very problematic from my viewpoint are the speeches, discussions, and interviews outside, when people talk about where they think interest rates should head and where the policy rate should head. That's where the criticism has been coming from. I have to tell you that a lot of people whom I respect tremendously are saying to me that it's making us look like the gang that can't shoot straight. I think it's a really serious problem. I understand that we want to keep the

priority of speaking our minds, but we have to work as a team, and I think that we're having a problem in this regard.

Let me talk about why I think this is dangerous. It's dangerous in terms of policy setting. You can see this is very blunt. Clearly, if you were in a multi-period game, you wouldn't be this blunt. But now I'm not going to be here anymore, so you can hate me—I don't care. [Laughter] But this kind of cacophony on this issue has the potential to damage us in two very serious ways. One is that it weakens the confidence in our institution, and I have to tell you that I love this institution. It's very hard for me to leave this place, but it's something I have to do. If the institution is damaged in terms of the confidence that the public and the politicians have in us, it will hurt us deeply. It will hurt us in terms of policy because it will weaken our credibility, which actually will make it harder to control inflation. So I consider this a very serious cost. The second issue is on the political front. It is very possible that we're going to have a reopening of the Federal Reserve Act with the next Administration and the next Congress. The reason I think it is possible is that we have to restructure our regulatory structure. There's no way to get around it—we are in a brave new world on this. That could lead to an opening of this issue. The problem here is, in that opening, there are a lot of people in the Congress who are very uncomfortable having policymakers who are not Presidential appointees and confirmed by the Senate. Two outcomes could come out of that. One is that they could take the vote away from the presidents, which I think would be a disaster because then you're not going to have good people going into the System. We won't have boards of directors that will be good. We won't have all of the benefits that we think we have from the current system. The other alternative is that we then have presidents who are actually appointed by the President and then confirmed by the Senate. I think, again, that hurts the private linkage.

So I feel very strongly about all three of these issues, but I think that you're going to come up with serious challenges in the future that could be very damaging to the System. So I hope you think about this and still like me for being blunt, and also miss me because there will be a little less amusement. Who else would have brought Monty Python into the FOMC? Thank you very much.

CHAIRMAN BERNANKE. Thank you, Governor Mishkin. Governor Duke.

MS. DUKE. Thank you. I support alternative B. I don't think that the "severe financial stress" scenario is out of the question right now.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN GEITHNER. Thank you, Mr. Chairman. I support alternative B for the reasons that you and many others have already stated.

CHAIRMAN BERNANKE. Thank you. I want to thank everyone for your comments today. I know we don't have agreement around the table, but as somebody once said, if everybody agrees, then everybody except one is redundant. [Laughter] I listened very carefully to what has been said. I understand your concerns. I think hard about them—I do every day. As we go forward, we will obviously continue to have these fruitful discussions.

I do think that we need to continue to clarify this exit strategy issue. One point I would make, and Governor Warsh alluded to it, is that we need to think of this as a state-dependent rather than a time-dependent strategy. We need to be clear not so much as to whether we are or are not going to raise rates but under what circumstances and why and what our objectives are. On that basis, I reiterate that my greater attention recently to financial and real conditions has to do with my view of the risks rather than my objective function.

I recommend no action today and alternative B. There were a number of suggestions for changes. I think I will avoid them just to avoid further controversy. My reasons for suggesting

alternative B were well stated by President Pianalto. It's hard to judge. I don't know what the markets will make of this, but my intention is for it to be slightly hawkish—to indicate a slight upward tilt in policy—which has several functions. First, if we don't move, it emphasizes our ongoing concern with inflation and perhaps provides some prophylactic protection with respect to expectations and so on. On the other hand, if conditions do warrant action, and it could be quick action, at least we will have provided the markets with some warning and some indication of our concern about this issue. So that's my recommendation. Any comments? Would you call the roll?

MS. DANKER. Yes. This vote includes the alternative B language from the table distributed this morning and the directive from the Bluebook.

“The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee in the immediate future seeks conditions in reserve markets consistent with maintaining the federal funds rate at an average of around 2 percent.”

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

CHAIRMAN BERNANKE. Thank you very much. The next meeting is September 16, and we will adjourn now to the Terrace Level of the Martin Building to pay honor to Governor Mishkin. Thank you very much.

END OF MEETING