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# MONETARY POLICY AND THE STATE OF THE ECONOMY, PART I

## HEARING

BEFORE THE

## COMMITTEE ON FINANCIAL SERVICES

## U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

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# MONETARY POLICY AND THE STATE OF THE ECONOMY, PART I

**Wednesday, February 25, 2009**

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON FINANCIAL SERVICES,
*Washington, D.C.*

The committee met, pursuant to notice, at 10:07 a.m., in room 2128, Rayburn House Office Building, Hon. Barney Frank [chairman of the committee] presiding.

Members present: Representatives Frank, Kanjorski, Waters, Maloney, Velazquez, Watt, Ackerman, Sherman, Meeks, Moore of Kansas, Capuano, Hinojosa, Baca, Lynch, Miller of North Carolina, Scott, Green, Cleaver, Hodes, Ellison, Klein, Wilson, Perlmutter, Donnelly, Foster, Carson, Minnick, Adler, Kosmas; Bachus, Castle, Royce, Lucas, Paul, Manzullo, Biggert, Capito, Hensarling, Garrett, Barrett, Neugebauer, McHenry, Putnam, Marchant, McCotter, Posey, Jenkins, Lee, Paulsen, and Lance.

The CHAIRMAN. This hearing of the Committee on Financial Services will come to order. Once again, we have with us the Chairman of the Federal Reserve.

At this point, I want to take the trouble to express my appreciation to the Chairman of the Federal Reserve and to the members. We had a hearing a week ago on CEO pay, and that got a lot of attention. We had a hearing, which was at least as significant—and in terms of the importance of what is going on in the country, I think more so—the day before when the Chairman graciously spent a lot of time with us as members got to talk about the authority the Federal Reserve has been exercising under that very expansive statute.

I would note again that I believe that once this crisis is behind us, we will have a collaborative effort to try to put some definition into the most open-ended statute I think I have ever seen. And while I admire the restraint and the care with which the Chairman has done this job, I don't think any of us think that it should be left that way. But I think also it is not the time to do it while we are dealing with the current crisis.

So I want to thank him and to thank the members.

Let me just say—I know a lot of us have had concerns. People have asked, well, what is going on with all the money that is being spent? I would urge people to get a look at that transcript. We have it on our Web site. I think it is important information for the country to know about.

Now, as to today's hearing—and you can start running the clock. Well, before you run the clock, let me just say, I am going to try

to hold members tightly to the 5-minute time limit. Again, the ranking member and I tried to shrink the committee, but we were overruled, so it is an unwieldy group. We have begun the process of using subcommittees more. I think that is working well, and we will continue to do that. We are constrained by the fact that we are such a large committee that our subcommittee room doesn't hold most of the subcommittees. But we are doing our best within that constraint.

And the other thing I would say is, on the Democratic side, if we do not reach you today in the questioning, you will get priority the next time the Chairman comes, which will be later this year, and we will go first to you at that time. So there may be more interest.

Does the ranking member have a comment he wants to make?

Mr. BACHUS. Chairman Bernanke, I just want to join with Chairman Frank in expressing my appreciation to you for your service under what have been extremely difficult times, and for your integrity and your insight. And I think the country is fortunate to have you at the helm of the Fed at this difficult time.

The CHAIRMAN. I thank the gentleman.

Now we will begin the remarks with the Chairman here. The protocol is 8 minutes on each side. I will begin with 5 minutes and then the chairman of the newly established Domestic Monetary Policy and Technology Subcommittee, Mr. Watt, will have a 3-minute statement.

I want to talk about the context in which we operate. I was very pleased that the President yesterday, I thought, very thoughtfully explained the dilemma we have; namely, that we have to get the credit system functioning again. And we do not have the option of sending all of the current people in that system to the gallows, as much as some people would like that to happen, or to simply say this system has been too flawed and must be junked, and let's start from scratch.

We simply cannot start from scratch. To restore the credit system, which has been a bipartisan effort going back to the previous Administration—and this committee has worked, I think, fairly constructively, although with allowances for some differences, with both Administrations, with the Federal Reserve, which has been a point of continuity—there is no option obviously other than to work within the existing system. That has a political drawback, and we are in an electoral context.

I have to say, when people tell me they don't want something to be done with political considerations, my response is that they should not ask 535 politicians to do it. That is inherent in the nature of our society; and it is a good thing, not a bad thing, the fact that we bring to these deliberations the concerns of the people we represent, their angers, their fears, their optimism, whatever.

That is what makes this the country what it is. And none of us, I think, want to apologize for that or retreat from it. There are more and less responsible ways to deal with that, but it is a good fact of our system.

We have an unhappiness on the part of a lot of citizens who are suffering deeply from the consequences of mistakes which most of them didn't make. Some did. There are people who took out loans they shouldn't have taken out. There are people who have been ir-

responsible in other ways. But, fundamentally, people are now being victimized for things for which they are not to blame. And they see us—by "us," I mean the Federal Government, the Bush Administration, the Obama Administration, Members of Congress—doing things from time to time that appear to be benefiting precisely the people at whom they are angry because they made mistakes. And the point, of course, is that you cannot reconstitute a system without doing some things that will go down to the benefit of the people in that system,

Now, efforts are being made to minimize the unnecessary benefit. The consensus appears to exist on both sides about restraining the compensation and lavish expenditures. There was a large degree of agreement—not quite as broad, a consensus—that something should be done to reduce foreclosures. There is a requirement that I think—again, we want to more broadly share that we want to urge people who receive Federal help to relend and to lend in certain sectors. But the President made the point yesterday, very thoughtfully, that anger has to be channeled, and we have to express the anger in ways that put some restraints on some of the actions, but do not prevent us from working to get the current system back on its feet,

Now, there is one aspect that I want to address; it is not the main subject of this hearing perhaps, but we do have the Humphrey-Hawkins bill before us. I think it is clear that one of the factors that contributes to the political difficulties in the broader sense, in the sense that it is democracy, you have to have electoral—you have to have popular support. One of the things that contributes to this difficulty is the absence of a social safety net and the perceived and, I believe, real unfairness of the distribution of our wealth.

It has most recently come up in the form of people at the top of the economic pyramid being very critical of protectionism. We have had lectures that we should not give in to the instinct to try to favor American-made products and American jobs. I have to say to my friends who argue that, that those arguments, by themselves, will not work very much in the absence of a broader social safety net. As long as the American people feel that they do not fairly participate on the whole in the benefits of trade, for example, and that people in the lower end and middle end, that they don't fully participate in the benefits, you cannot talk them out of their opposition.

If people really want to help us get to a situation in which we can go forward with trade properly conducted, which I agree is very good for the economy, then help us get a health care system, as the President talks about. If we do not do a better job of seeing that both the benefits and the costs of this sort of economic change and globalization—if that is not more fairly shared on both the positive and negative sides, the opposition that people are decrying to a number of things going forward will increase.

The gentleman from Alabama is recognized, I believe, for 2 minutes.

Mr. BACHUS. Mr. Paul for 2 minutes.

The CHAIRMAN. I am sorry. The gentleman from Texas, Mr. Paul, is recognized for 2 minutes.

Dr. PAUL. Thank you, Mr. Chairman.

Yesterday, a report came out that said that the consumer confidence index was down to 25; sometimes I think that might be overly optimistic. But nevertheless I think that vote of confidence really is a reflection on our financial system, our monetary policy, our spending policies here in Congress; and then they see it in the economy.

But it is fundamental for us to understand this, because if we think we can patch up a system that failed, it is not going to work. We have to come to the realization that there is a sea change in what is happening, this is an end of an era, and that we can't reinflate the bubble.

Just as we devised a new system at Bretton Woods in 1944, which was doomed to fail—it failed in 1971, and then we came up with the dollar reserve standard, which was a paper standard—it was doomed to fail, and we have to recognize that it has failed.

And if we think we can reinflate this bubble by artificially creating credit out of thin air and calling it capital, believe me, we don't have a prayer of solving these problems. We have a total misunderstanding of what credit is versus capital. Capital can't come from the thin air creation by a Federal Reserve system; capital has to come from savings. We have to work hard, produce, live within our means, and what is left over is called "capital."

This whole idea that we can recapitalize markets by merely turning on the printing presses and increasing credit is a total fallacy. So the sooner we wake up to realize that a new system has to be devised, the better.

Right now, I think the central bankers of the world realize exactly what I am talking about and they are planning. But they are planning another system that goes one step further to internationalize regulations, internationalize the printing press, give up on the dollar standard. But we have to be very much aware that system will be no more viable. We have to have a system which encourages people to work and to save.

What do we do now? We are telling consumers to spend and continue the old process. It won't work.

The CHAIRMAN. The gentleman from Delaware, Mr. Castle, is recognized for 2 minutes.

Mr. CASTLE. Thank you, Mr. Chairman, and Ranking Member Bachus. I want to thank you for holding today's hearing and to thank Chairman Bernanke for once again providing his expertise for this panel.

Since the onset of the economic downturn, the Federal Reserve and the Treasury have provided enormous amounts of financial assistance, $1.4 trillion and $350 billion respectively, in an effort to stabilize our financial system while theoretically freeing up credit for small business, car buyers, home buyers, and even students. However, reports have highlighted that financial institutions are still troubled and that access has not trickled down to consumers in need.

Although the Fed recently launched a Web site providing a detailed description of the tools they have employed in an effort to restore our economy, I remain interested in knowing how the liquidity provided by the Fed is, in turn, being used by the institu-

tions in need of this assistance. Are we reaching the goal of freeing up credit? Are the institutions more stable? Is the credit card industry facing the same turmoil as a result?

A lack of understanding of exactly how these funds are used is just one of the problems that arises as a result of the lack of oversight and checks and balances over the Federal Reserve's recent extraordinary activities.

I believe more attention to this issue is necessary to fully understand the effectiveness of the Federal Government's efforts in reducing the economic crisis. And I believe these questions should be answered before the Federal Reserve is vetted for any future role as a systemic risk regulator.

I yield back the balance of my time.

The CHAIRMAN. The gentleman from North Carolina, the chairman of the Domestic Monetary Policy and Technology Subcommittee, is recognized for 3 minutes. Mr. Watt.

Mr. WATT. Thank you, Mr. Chairman.

In ordinary times during my tenure on this committee, this semiannual hearing has focused almost exclusively on the Fed's use of interest rate changes to impact economic activity, stimulate job creation, and control inflation. However, these are not ordinary times, and it is obvious that short-term concerns about inflation have largely given way to some concern about the prospect of deflation and to short, intermediate, even long-term concerns about employment and job growth.

The Act mandates the Fed to take steps to achieve maximum employment. While some economists subscribe to the notion that there is a "natural rate of unemployment" of around 4.5 percent—and it always stunned me to hear former Fed Chairman Greenspan profess that unemployment of less than 5.5 to 6 percent would almost surely lead to inflation—I daresay that there are no economists who are not concerned when they see the national unemployment rate meet and exceed the rate that has long been so prevalent in many minority communities. These are clearly perilous times.

It is important to remember that beyond the headlines of mass layoffs and rising unemployment rates, real people are impacted. These are people who have real hopes, dreams, and aspirations to provide for their families and contribute to their communities. They can't reach these aspirations without jobs.

Against this backdrop, the sole question I really want addressed today is, what additional tools does the Fed have to stop escalating unemployment and to spur new jobs and the creation of new jobs?

In his February 18th speech, Chairman Bernanke vowed to take strong and aggressive action to halt the economic slide and improve job growth. Today, I hope to hear specifics on the Fed's plans and on whether there is anything else Congress can and should be doing to help.

I look forward to the Chairman's testimony to address these difficult questions, and I yield back.

The CHAIRMAN. The gentleman from Texas, Mr. Hensarling, is recognized for 2 minutes.

Mr. HENSARLING. Thank you, Mr. Chairman.

To state the obvious, our countrymen are hurting and the latest unemployment figures are alarming. Last night, our President said,

"We must understand how we arrived at this moment. Our country is in economic turmoil principally because of Federal policies, undoubtedly noble in intent, that incented, cajoled, blessed or mandated the financial institutions lend money to people to buy homes that they could not afford to keep. Instead of lifting up the economic opportunities of the borrower, Federal policy helped bring down the lending standards of lenders. For those who wanted to roll the dice of the government duopoly, Fannie and Freddie, Lady Luck left the building, and too many Americans lost their homes and lost their dreams."

Now, Congress, as part of an ill-fated remedy, has passed the single most expensive spending bill in our Nation's history and will vote on yet another bloated spending bill today. Together, at a time when American families are struggling to pay their bills, these two legislative bills will cost the average American household over $13,000 apiece and place our Nation deeper into unconscionable debt.

History shows that no nation can borrow and spend its way into prosperity. A previous Secretary of Treasury said, "We are spending more money than we have ever spent before, and it does not work. After 8 years, we have just as much unemployment as when we started and an enormous debt to boot." That quote, of course, is from President Franklin Roosevelt's Treasury Secretary, Henry Morgenthau, Jr.; his words were spoken in May of 1939.

When Japan experienced a real estate meltdown similar to ours in the early 1990's, its government enacted 10 stimulus bills, raising their per capita debt to the highest level of any industrialized nation. For their efforts, they experienced a lost decade. No economic growth, no new jobs, an economy dependent on the central government in Tokyo, and the human misery associated with going from the second highest per capita income in the world to the tenth.

I hope that we in Congress can learn from these examples. I yield back the balance of my time.

The CHAIRMAN. The gentleman from New Jersey, Mr. Garrett, for the final 2 minutes.

Mr. GARRETT. Thank you, Chairman Frank. I also thank you for your comments with regard to addressing the current crisis first and then looking at the Federal Reserve situation.

I join my colleagues and certainly understand the depths of the financial economic crisis facing this country. But I am also concerned about the unintended consequences of some of the recently enacted and proposed policy responses. For example, President Obama recently announced a $75 billion foreclosure prevention plan. A lot of folks out there, including more than 90 percent who are current on their mortgages, are wondering why their tax dollars should go to help someone else's mortgage when they are stretching their dollars as best they can just to pay their own bills.

But beyond those fundamental fairness concerns, I am also concerned about the effectiveness of these proposals. It was Professor Robert Shiller who was the coauthor of the Case-Shiller Housing Index, and he was someone who actually pointed out the housing bubble before many others were talking about it. He has said in recent days that although housing prices have fallen about 25 per-

cent from their peak, they are still way too high when compared to their historical levels, the fact that they have fallen only a little more than halfway back to their historical trend.

If that is the case, I am worried that the Administration proposals will only delay the inevitable, full correction of the marketplace while saddling future generations with tens of billions of dollars of additional debt.

Delaying the onset of the true bottom, it seems to me, has other unintended consequences. Not until we reach the bottom will we begin to provide certainty on the value of so-called "toxic mortgages" found on the balance sheets. This uncertainty surrounding the value of these assets is one of the main contributors to the downward spiral, so the sooner we reach a certainty, the better.

I can anticipate the response from some would be that we don't want to have an overreaction, an overcorrection in the marketplace. Well, my response to that response will be that various actions may well do just that by negatively affecting credit availability, capital infusion, and pricing mechanisms as well.

So I would be curious to hear your response to that. And I look forward to the rest of your testimony.

I yield back.

The CHAIRMAN. Mr. Chairman, you may proceed. Take whatever time you need. And obviously, any supporting documents will be made a part of the record. We take note of the submission of the Monetary Policy Report, which is part of the record here. Please go ahead.

**STATEMENT OF THE HONORABLE BEN S. BERNANKE, CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM**

Mr. BERNANKE. Thank you, Mr. Chairman.

Chairman Frank, Representative Bachus, and members of the committee, I appreciate the opportunity to discuss monetary policy and the economic situation, and to present the Federal Reserve's Monetary Report to the Congress.

As you are aware, the U.S. economy is undergoing a severe contraction. Employment has fallen steeply since last autumn, and the unemployment rate has moved up to 7.6 percent. The deteriorating job market, considerable losses of equity in housing wealth, and tight lending conditions have weighed down consumer sentiment and spending. In addition, businesses have cut back capital outlays in response to the softening outlook for sales as well as the difficulty of obtaining credit.

In contrast to the first half of last year when robust foreign demand for U.S. goods and services provided some offset to weakness in domestic spending, exports slumped in the second half as our major trading partners fell into recession, and some measures of global growth turned negative for the first time in more than 25 years. In all, U.S. real gross domestic product declined slightly in the third quarter of 2008 and that decline steepened considerably in the fourth quarter.

The sharp contraction in economic activity appears to have continued into the first quarter of 2009. The substantial declines in the prices of energy and other commodities last year and the grow-

ing margin of economic slack have contributed to a substantial lessening of inflation pressures. Indeed, overall consumer price inflation measured on a 12-month basis was close to zero last month. Core inflation, which excludes the direct effects of food and energy prices, also has declined significantly.

The principal cause of the economic slowdown was the collapse of the global credit boom and the ensuing financial crisis, which has affected asset values, credit conditions, and consumer and business confidence around the world. The immediate trigger of the crisis was the end of the housing booms in the United States and other countries and the associated problems in mortgage markets, notably the collapse of the U.S. subprime mortgage market.

Conditions in housing and mortgage markets have proved a serious drag on the broader economy, both directly through their impact on residential construction and related industries and on household wealth and indirectly through the effects of rising mortgage delinquencies on the health of financial institutions. Recent data show that residential construction and sales continue to be very weak. House prices continue to fall, and foreclosure starts remain at very high levels.

The financial crisis intensified significantly in September and October. In September, the Treasury and the Federal Housing Finance Agency placed the government-sponsored enterprises Fannie Mae and Freddie Mac into conservatorship, and Lehman Brothers Holdings filed for bankruptcy. In the following week, several other large financial industries failed, came to the brink of failure, or were acquired by competitors under distressed circumstances.

Losses at a prominent money market mutual fund prompted investors who had traditionally considered money market mutual funds to be virtually risk free to withdraw large amounts from such funds. The resulting outflows threatened the stability of short-term funding markets, particularly the commercial paper market upon which corporations rely heavily for their short-term borrowing needs.

Concerns about potential losses also undermine confidence in wholesale bank funding markets, leading to further increases in bank borrowing costs and a tightening of credit availability from banks. Recognizing the critical importance of the provision of credit to businesses and households from financial institutions, the Congress passed the Emergency Economic Stabilization Act last fall. Under the authority granted by this Act, the Treasury purchased preferred shares in a broad range of depository institutions to shore up their capital bases.

During this period, the FDIC introduced its temporary liquidity guarantee program which expanded its guarantees of bank liabilities to include selected senior unsecured obligations and all non-interest-bearing transactions deposits. The Treasury, in concert with the Federal Reserve and the FDIC, provided packages of loans and guarantees to ensure the continued stability of Citigroup and Bank of America, two of the world's largest banks.

Over this period, governments in many foreign countries also announced plans to stabilize their financial institutions, including through large-scale capital injections, expansions of deposit insurance, and guarantees of some forms of bank debt.

Faced with a significant deterioration of financial market conditions and a substantial worsening of the economic outlook, the Federal Open Market Committee (FOMC) continued to ease monetary policy aggressively in the final months of 2008, including a rate cut coordinated with five other major central banks.

In December, the FOMC brought its target for the Federal funds rate to a historically low range of zero to 0.25 percent, where it remains today. The FOMC anticipates that economic conditions are likely to warrant exceptionally low levels of the Federal funds rate for some time.

With the Federal funds rate near its floor, the Federal Reserve has taken additional steps to ease credit conditions. To support housing markets and economic activity more broadly, and to improve mortgage market functioning, the Federal Reserve has begun to purchase large amounts of agency debt and agency mortgage-backed securities. Since the announcement of this program last November, the conforming fixed mortgage rate has fallen nearly 1 percentage point.

The Federal Reserve has also established new lending facilities and expanded existing facilities to enhance the flow of credit to businesses and households. In response to heightened stress in bank funding markets, we increased the size of the term auction facility to help ensure that banks could obtain the funds they need to provide credit to their customers, and we expanded our network of swap lines with foreign central banks to ease conditions in interconnected dollar funding markets at home and abroad.

We also established new lending facilities to support the functioning of the commercial paper market and to ease pressures on money market mutual funds.

In an effort to restart securitization markets to support the extension of credit to consumers and small businesses, we joined with the Treasury to announce the Term Asset-Backed Securities Loan Facility, or TALF. The TALF is expected to begin extending loans soon.

The measures taken by the Federal Reserve, other U.S. Government entities, and foreign governments in September have helped to restore a degree of stability to some financial markets. In particular, strains in short-term funding markets have eased notably since the fall, and LIBOR rates upon which borrowing costs for many households and businesses are based, have decreased sharply.

Conditions in the commercial paper market also have improved, even for lower-rated borrowers. And the sharp outflows from money market mutual funds seen in September have been replaced by modest inflows.

Corporate risk spreads have declined somewhat from extraordinarily high levels, although these spreads remain elevated by historical standards. Likely spurred by the improvements in pricing liquidity, issuance of investment-grade corporate bonds has been strong, and speculative grade issuance, which was near zero in the fourth quarter, has picked up somewhat. As I mentioned earlier, conforming fixed mortgage rates for households have declined.

Nevertheless, despite these favorable developments, significant stresses persist in many markets. Notably, most securitization

markets remain shut other than for conforming mortgages, and some financial institutions remain under pressure. In light of ongoing concerns over the health of financial institutions, the Secretary of the Treasury recently announced a plan for further actions. This plan includes four principal elements.

First, a new capital assistance program will be established to ensure that banks have adequate buffers of high-quality capital, based on the results of comprehensive stress tests to be conducted by the financial regulators, including the Federal Reserve.

Second is a public-private investment fund in which private capital will be leveraged with public funds to purchase legacy assets from financial institutions.

Third, the Federal Reserve, using capital provided by the Treasury, plans to expand the size and scope of the TALF to include securities backed by commercial real estate loans and, potentially, other types of asset-backed securities as well.

And fourth, the plan includes a range of measures to help prevent unnecessary foreclosures. Together, over time, these initiatives should further stabilize our financial institutions and markets, improving confidence and helping to restore the flow of credit needed to promote economic recovery.

The Federal Reserve is committed to keeping the Congress and the public informed about its lending programs and balance sheet. For example, we continue to add to the information shown in the Fed's H.4.1 statistical release, which provides weekly detail on the balance sheet and the amounts outstanding for each of the Federal Reserve's lending facilities. Extensive additional information about each of the Federal Reserve's lending programs is available online.

The Fed also provides bimonthly reports to the Congress on each of its programs that rely on the Section 13(3) authorities. Generally our disclosure policies reflect the current best practices of major central banks around the world.

In addition, the Federal Reserve's internal controls and management practices are closely monitored by an independent inspector general, outside private sector auditors, and internal management and operations divisions and through periodic reviews by the Government Accountability Office.

All that said, we recognize that recent developments have led to a substantial increase in the public's interest in the Fed's programs and balance sheet. For this reason, we at the Fed have begun a thorough review of our disclosure policies and the effectiveness of our communication.

Today, I would like to highlight two initiatives. First, to improve public access to information concerning Fed policies and programs, we recently unveiled a new section of our Web site that brings together in a systematic and comprehensive way the full range of information that the Federal Reserve already makes available, supplemented by explanations, discussions, and analyses. We will use that Web site as one means of keeping the public and the Congress fully informed about Fed programs.

Second, at my request, Board Vice Chairman Donald Kohn is leading a committee that will review our current publications and disclosure policies relating to the Fed's balance sheet and lending policies. The presumption of the committee will be that the public

has the right to know and that the nondisclosure of information must be affirmatively justified by clearly articulated criteria for confidentiality based on factors such as reasonable claims to privacy, the confidentiality of supervisory information, and the need to ensure the effectiveness of policy.

In their economic projections for the January FOMC meeting, monetary policymakers substantially marked down their forecast for real GDP this year relative to the forecast they prepared in October. The central tendency of their most recent projections for real GDP implies a decline of 0.5 percent to 1.25 percent over the 4 quarters of 2009. These projections reflect an expected significant contraction in the first half of this year combined with an anticipated gradual resumption of growth in the second half.

The central tendency for the unemployment rate in the 4th quarter of 2009 was marked up to a range of 8.5 percent to 8.75 percent. Federal Reserve policymakers continue to expect moderate expansion next year with a central tendency of 2.5 percent to 3.25 percent growth of real GDP, and a decline in the unemployment rate by the end of 2010 to a central tendency of 8 percent to 8.25 percent.

FOMC participants marked down their projections for overall inflation in 2009 to a central tendency of 0.25 percent to 1 percent, reflecting expected weakness in commodity prices and the disinflationary effects of significant economic slack. The projections for core inflation also were marked down to a central tendency bracketing 1 percent. Both overall and core inflation are expected to remain low over the next 2 years.

This outlook for economic activity is subject to considerable uncertainty, and I believe that overall the downside risks probably outweigh those on the upside.

One risk arises from the global nature of the slowdown which could adversely affect U.S. exports and financial conditions to an even greater degree than currently expected. Another risk derives from the destructive power, the so-called "adverse feedback loop," in which weakening economic and financial conditions become mutually reinforcing. To break the adverse feedback loop, it is essential that we continue to complement fiscal stimulus with strong government action to stabilize financial institutions and financial markets.

If actions taken by the Administration, the Congress, and the Federal Reserve are successful in restoring some measure of financial stability—and only if that is the case, in my view—there is a reasonable prospect that the current recession will end in 2009, and that 2010 will be a year of recovery. If financial conditions improve, the economy will be increasingly supported by fiscal and monetary stimulus, the salutary effects of steep decline in energy prices since last summer and the better alignment of business inventories and final sales as well as the increased availability of credit.

To further increase the information conveyed by the quarterly projections, FOMC participants agreed in January to begin publishing their estimates of the values to which they expect key economic variables to converge over the longer run, say, in a horizon of 5 or 6 years.

Under the assumption of appropriate monetary policy and in the absence of new shocks to the economy, the central tendency for the participants' estimates of the longer-run growth rate of real GDP is 2.5 percent to 2.75 percent; the central tendency for the longer-run rate of unemployment is 4.75 percent to 5 percent; and the central tendency for the longer-run rate of inflation is 1.75 percent to 2 percent with the majority of participants looking for 2 percent inflation in the long run.

These values are all notably different from the central tendencies of their projections for 2010 and 2011, reflecting the view of policymakers that a full recovery of the economy from the current recession is likely to take more than 2 or 3 years. The longer-run projections for output growth and unemployment may be interpreted as the committee's estimates of the rate of growth of output and unemployment that are sustainable in the long run in the United States, taking into account important influences such as trend growth rates of productivity and the labor force improvements in worker education and skills, the efficiency of the labor market and matching workers in jobs, government policies affecting technological development or the labor market and other factors.

The longer-run projections of inflation may be interpreted, in turn, as the rate of inflation that FOMC participants see as most consistent with the dual mandate given to it by the Congress; that is, the rate of inflation that promotes maximum sustainable employment, but also delivering reasonable price stability.

This further extension of the quarterly projection should provide the public a clearer picture of the FOMC's policy strategy for promoting maximum employment and price stability over time. Also, increased clarity about the FOMC's views regarding longer-run inflation should help to better stabilize the public's inflation expectations, thus contributing to keeping actual inflation from rising too high or falling too low.

At the time of our last Monetary Policy Report, the Federal Reserve was confronted with both high inflation and rising unemployment. Since that report, however, inflation pressures have receded dramatically while the rise in the unemployment rates have accelerated and financial conditions have deteriorated. In light of these developments, the Federal Reserve is committed to using all available tools to stimulate economic activity and to improve financial market functioning. Toward that end, we have reduced the target for the Federal funds rate close to zero, and we have established a number of programs to increase the flow of credit to key sectors of the economy.

We believe that these actions, combined with the broad range of other fiscal and financial measures being put in place, will contribute to a gradual resumption of economic growth and improvement in labor market conditions in a context of low inflation. We will continue to work closely with the Congress and the Administration to explore means of fulfilling our mission of promoting maximum employment and price stability.

Thank you, Mr. Chairman.

[The prepared statement of Chairman Bernanke can be found on page 60 of the appendix.]

The CHAIRMAN. Thank you, Mr. Chairman.

At a future date, I will ask you if we can continue a very important discussion in public, which you reached at the end, which is the notion that the central tendency of these major statistics should be published. The question of the dual mandate, the question of whether or not we are well-served by more precision, or at least more specificity, those are important questions—and the question of inflation targeting and the dual mandate interrelation. And I want to thank you because I know there has been a lot of—the support for the notion I think what you have put forward here is a thoughtful advancement of this without fully broaching that issue, which remains to be talked about. This is not inflation targeting, but it is a sensible set of measures.

In particular, one of the things I will be asking us to address—I think this is very important—you talk about the central tendency of unemployment, 4.75 to 5 percent. You also talk about the factors: growth rates of productivity; improvements in worker education skills; the efficiency of the labor market; government policies affecting technology of development in the labor market.

I know you agree that these are factors that are within our control if we do them well. What that means is that if we got a focused set of policies, it is possible to bring down that 4.75 to 5 percent unemployment rate without having an inflationary effect. And I say, that is I think one of our goals going forward is to talk about how we can improve the employment picture in noninflationary ways.

But for now, I want to talk about, obviously, the current crisis. The question of foreclosures has come up, and I was struck by your point—you have made it before—that it was the granting of mortgages—particularly subprime mortgages that should not have been granted, that the borrower shouldn't have taken out and the lender shouldn't have made—that was the single most prominent cause of the current crisis. Is that a fair description?

Mr. BERNANKE. It was an important trigger, Mr. Chairman. There was a very broad-based credit boom that went through many different sectors. But the subprime crisis was the trigger that set things off.

The CHAIRMAN. Why did we get this? To fix it in the future, we have to get some sense of why it happened. What led us to a situation where so many subprime loans were made that shouldn't have been made?

Mr. BERNANKE. Mr. Chairman, as I said, there was a broader credit boom, and the causes of that have been under much dispute. My own view is that an important factor was the tremendous flows of capital into the United States and other industrial countries, which gave financial institutions the feeling that money was essentially free and that the demand for credit products was very high; and it led them to a whole range of practices—

The CHAIRMAN. Was a related aspect of that, Mr. Chairman, that you no longer needed to have primarily depositor funds to make these? Because depositor funds tend to be more carefully handled, it seems to me, in our system through regulation, and the new sources of capital you are talking about were less subject to those kinds of rules.

Mr. BERNANKE. That capital looked for different ways to find investment vehicles, and the originate-to-distribute model, which involved lending and then selling off the loans down the chain without sufficient checks and balances, was part of the problem. And at the front end of the subprime market, obviously there was very poor underwriting and excessive optimism about house prices.

The CHAIRMAN. Thank you.

So then the question is, you know, what should we do about it? There are arguments that say, we should not intervene to try and slow down the foreclosure rate through public policy. One of the arguments against that—and I know it is not the only one—is the moral hazard argument; that is, if you absolve people from the serious consequence of their own misjudgments, they may make those misjudgments again.

One of the things I think people are overlooking is that when we talk about stopping this from repeating itself, we are not simply relying on people having had a bad feeling about it, but we are talking about rules and laws that will make it impossible.

Would you discuss briefly—in 1994, Congress gave the Federal Reserve authority, which went unused for a while, but which you invoked, I guess in 2007. Would you close by talking about the extent to which the policies you have put forward with regard to regulating some of this lending in the future alleviate the moral hazard issue?

Mr. BERNANKE. Yes, Mr. Chairman.

As you know we have—under HOEPA, we have set up a set of rules for mortgage lending—

The CHAIRMAN. HOEPA is a 1994 statute that applied to all lenders, not just bank lenders, and required certain standards of underwriting documentation, escrow, and other practices. We believe, if properly enforced—and we are working together with State authorities and others to make sure they will be enforced—our rules would be a very important check on bad lending practices.

Mr. BERNANKE. That is correct.

The CHAIRMAN. Thank you.

Let me just add for the information—this committee, as members know—actually, earlier, the gentleman from Alabama and I and others tried to work on something. We were not successful for a variety of reasons. But in 2007, this committee did pass a statute that would embody much of what you talk about. Many of us think that we should continue to do that.

I would just let people know, it is my intention to have this committee mark-up such a bill before the April break, precisely along the lines the Chairman was talking about, probably going a little further in some areas.

The gentleman from Alabama.

Mr. BACHUS. Thank you, Mr. Chairman. I am going to yield my 5 minutes to the gentleman from South Carolina, Mr. Barrett.

Before I do, let me just simply say this, Mr. Chairman. I believe there is substantial private capital sitting on the sidelines. I think the challenge is to get that committed. And I believe because of some of the fits and starts in government policy, what seems to be the lack of consistency, it has created uncertainty. And I would just

simply urge a greater certainty and consistency in what government policies and actions will be, going forward.

I think that will be a tremendous help.

Mr. BARRETT. Thank you. I thank the gentleman for yielding.

Welcome, Mr. Chairman. We are going to make you an honorary member—I don't know if you will like that or not—but as many times as you have been here. I want to pick up where the chairman left off in his line of questioning.

You talked about, not necessarily the only factor, but one of the factors is a lot of these home loans were made to people who can't necessarily afford them; and we have gotten in a bind. There are some proposals going around now, Mr. Chairman, about judges rewriting these contracts. Give me some feedback on that. I mean, is this a bad thing?

If you have people who can't make their payments initially, and we are going to rewrite them again, and they still can't afford them—give me your thoughts on these kinds of policies that are being batted around.

Mr. BERNANKE. Well, I can talk about them broadly in terms of effectiveness. But let me address the narrow question, the moral hazard question that you are concerned about.

Mr. BARRETT. Yes, sir.

Mr. BERNANKE. I think, as the chairman pointed out, part of the issue was mortgages that should not have been made and for which lenders did not exert sufficient responsibility. In that respect, there is some case, I think, to try to unwind the adverse effects of that on the borrowers. For some borrowers, presumably they knew what they were getting into. And that raises the issue that many Americans say, well, I was responsible in my mortgage. Why should I help somebody who was not?

It is hard to know what the relative importance of those two factors is. But what I would say is, from a public policy point of view, that large numbers of foreclosures—and we are looking at 2.4 million foreclosure starts in 2008 or more—are detrimental not just to the borrower and the lender, but to the broader system. And we have seen, for example, the effects of clusters of foreclosures on communities that reduce asset values, that reduce tax revenues. It has much more broader socioeconomic effects, the effects on the housing market. And I do believe there is a risk.

I understand very much the point Mr. Garrett made earlier about getting the housing values down to their fundamental prices, and I agree 100 percent that needs to be done. But the tremendous problems in the mortgage market, together with the supply of housing being put on the market by foreclosures, those two things together with psychological and other factors put us in real danger of driving house prices well below the fundamentals, which would be detrimental both to financial stability and to macroeconomic stability.

So I think there is in many situations a case where we have to trade off the short-term moral hazard issues against the broader good and to think, going forward, in terms of regulation or other practices; and also private-sector practices, how we can avoid these problems in the future.

Mr. BARRETT. I know in your statement, Mr. Chairman, you talked about inflation, and you didn't seem to be too concerned. I am concerned. I think—the amount of money that the Fed has put into the money supply of the economy, I think sooner or later that is going to start to percolate a little bit.

So tell me, forward thinking, what is your plan to take this money out, now, once things get going, so inflation doesn't become a problem?

Mr. BERNANKE. Yes, sir. As you point out, we don't expect inflation to be a problem for the immediate future—the next couple of years, at least—given the various conditions we are seeing.

It is very important for us, once the economy begins to recover—and, as usual, the Fed would have to begin to tighten the policy. It is very important for us to unwind our monetary expansion. We have thought about that very carefully. We are spending a lot of time in our FOMC meetings thinking through how we would do that in each case. I won't go through all the details; I have talked about them in some length in some speeches recently.

But many of our lending programs are very short term in nature. They can be quickly unwound. Some rely on our 13(3) authority, which is an emergency authority which must be unwound with conditions normalized. We also have other tools, such as our ability to pay interest on reserves, which will help us raise interest rates even if we don't get the amount of money outstanding back down as quickly as we otherwise would like. So we are quite confident that we can raise interest rates, reduce the money supply and do that all in a timely way to avoid any inflationary consequences.

I would point out in terms of precedent that the Japanese, with their quantitative easing, tremendously increased their money supply for a long period, and they are still suffering from deflation.

So there is no necessary connection; as long as policy is unwound at an appropriate time, which we are certain we can do, that will be a good guarantee against the inflation risk.

Mr. BARRETT. Very quickly, Mr. Chairman.

The CHAIRMAN. I am sorry. We don't have time for another question. The time has expired.

The gentleman from Pennsylvania.

Mr. KANJORSKI. Thank you very much, Mr. Chairman.

Mr. Chairman, last night, of course, the President gave the State of the Union address; and I thought, for the first time he covered two major points that were important to my constituents and many of the people I talk to across the country. And I will give you the opportunity today perhaps to do the same thing.

The President not only described the seriousness of the economic problem that we have, but he went on to address the solution to that problem. And it put it in context that people no longer should think, if they listened to his address last night, that this is just an ordinary recession or ordinary times.

As you recounted in your opening statement, you talked about those fateful days in September. And—I remember them quite well, and there is a lot of misinformation and disinformation about what happened. And I think I remember either you or Secretary Paulson saying that when you stepped away from the precipice and you did

not fall over, many people do not believe that you were in risk of falling over.

But I think all of us know that that risk was very present between the 15th of September and, say, the 24th of September when you appeared before this committee and gave some of the descriptions of the problems.

I think it would be very helpful if you could concentrate on describing those events of that fateful week—how close we came, what actions you recommended and this Congress took to avert that disaster that some of us called a "meltdown" or "destruction of our economic system"—so that the American people will begin to realize that you already have been victorious in some respects: that we didn't go over the edge, that you now have a plan, together with the Administration, over a long period of time—a year, 18 months or 2 years—that should bring about recovery.

Would you take the opportunity to spell out that week and your success and Secretary Paulson's success?

Mr. BERNANKE. Mr. Kanjorski, the financial crisis intensified quite severely in September. It was sparked, in turn, to some extent by the weakening of the global economy. That crisis—

The CHAIRMAN. All those pagers have a shutoff switch. Please use it.

Go ahead.

Mr. BERNANKE. That crisis involved the increased pressure on a number of financial institutions including, as you know, Lehman Brothers, AIG, and others. And we were quite concerned that there was going to be a large number of failures that would be extraordinarily dangerous to the world financial system and to the world economy.

Secretary Paulson and I came to the Congress, and we presented what at the time was viewed as being a very scary scenario about the potential risks to the world economy if the situation was allowed to get out of hand.

In retrospect, I think in some ways we were a little bit too optimistic. The power of the financial crisis on global economic activity has been extraordinary. In my visits to emerging markets, they say, well, you know, on Tuesday things were fine; on Thursday, suddenly it was just a change in the atmosphere, and there was an enormous impact.

So the financial crisis has had a very powerful impact on the world economy, and it is still continuing.

Now, in September and October, we came very, very close to a global financial meltdown, a situation in which many of the largest institutions in the world would have failed, where the financial system would have shut down and, in my view, in which the economy would have fallen into a much deeper, much longer, and more protracted recession. Fortunately, the Congress acted very quickly and under a lot of political controversy, to provide the Troubled Asset Relief Program. That funding, together with the FDIC and the Fed actions, was able to stabilize our banking system. We have not had a major financial failure since Lehman in mid-September.

Similar actions were taken around the world by the British, the Europeans, and many other countries to stabilize their banking systems.

We have obviously had a very difficult time. The recession is serious. The financial conditions remained difficult, but I do quite seriously believe that we avoided in mid-October, through a global coordinated action and the wisdom and foresight of the Congress and providing the necessary funds, a collapse of the global financial system which would have led us into a truly deep and very protracted economic crisis.

Mr. KANJORSKI. Thank you, Mr. Chairman.

The CHAIRMAN. We will have to go vote. I plan to move this as quickly as possible. I may not make all the votes. We have a 15-minute vote and two 5-minute votes. I would urge people, if you want to make a quick vote on the second, come back. We are going to keep this thing going.

I will forgo the first one because we are going to have a later vote coming up, and I want to maximize members' chances to do this.

The gentleman from Oklahoma, Mr. Lucas, is now recognized for 5 minutes.

Oh, I am sorry. Mr. Paul for 5 minutes; I misread my chart here. Mr. Paul.

Dr. PAUL. Thank you. I have two quick points I want to make.

I want to restate the point I made earlier about credit not really being capital. And I think that is an important point to make because we work on the illusion that if we can create credit units at the Federal Reserve System, and inject them into the banking system, we have capital. I maintain that capital can only come from hard work and savings, and I think that is an important distinction.

The CHAIRMAN. Would the gentleman suspend?

If members are leaving the room, please do it quietly out of consideration for the members who are asking questions. Let me repeat to my colleagues, on leaving the room, please hold your conversations until you leave.

The gentleman may continue.

Dr. PAUL. Also, I wanted to make a point about the definition of inflation. You talked about inflation being under control. But to me and the free market economists believe inflation is increasing the supply of money and credit, and sometimes it leads to higher prices in an unpredictable fashion. And, therefore, if we concentrate on—only on the prices, then we don't look at the real culprit; and the culprit is the increase in the supply of money, of credit; and obviously that is sky high right now when you think about what has happened in the past year.

If increasing the supply of money and credit and low interest rates were a panacea, we should have seen some results. But in the past year, we have done a lot to stimulate the economy and not much has happened. In the last 12 months, the national debt has gone up $1.5 trillion, and if you add up what we have spent in the Congress, plus what you have injected and guaranteed, it is over $9 trillion. And nothing seems to be helping.

But I think our problems started a lot sooner than just last year. I believe they really started in the year 2000, when we were able to, with the help of the Federal Reserve and some housing programs, to reinject and to once again inflate the bubble. But the

market really never recovered. True job growth never existed in the past 8 or 9 years.

Now we are suffering the consequences because it is a failed policy, and it is not working at all. And we don't change anything. If we got into this trouble because we had low interest rates, getting businessmen and savers to do the wrong thing, just doing more of the wrong thing continuously, I can't see how this is going to be helpful.

My question to you, Mr. Chairman, is this: What will it take for you to say to yourself, could I be wrong? You know, what if I am mistaken? How long is this going to go on, $9 trillion?

What if, say, 5 years from now we are in a deep, deep slump with your definition of inflation, what if we have high prices going and the economy is very, very weak and unemployment is high? Would you say to yourself then, boy, maybe I really messed up? Maybe I was on the wrong track? Maybe the free market people were right? Maybe Keynes was wrong?

Would you ever consider that or are you absolutely locked into your position?

Mr. BERNANKE. I am always open to changing my mind when the facts change, absolutely.

I will, first of all, agree with you about credit and liquidity. The Federal Reserve has the capacity to provide liquidity against short-term lending against collateral. We cannot provide capital. We understand the distinction, and that is why the TARP and these other programs have been important.

Obviously, the best kind of capital is private capital, and the objective is to get the financial system in a condition where private capital would come back in. One very important mark of success would be that private capital is coming off the sidelines, as Congressman Bachus mentioned, and back into the financial system. In terms of the overall approach, I think I do have some historical evidence on my side. There have been many examples in the past of financial crises having very substantial negative effects on the economy. The economy has not recovered in many of those cases until the financial situation was stabilized.

We know, broadly speaking, what is needed. We need clarity about the asset positions of the banks. We need sufficient capital. We need sufficient liquidity. We need to take other steps to ensure regulatory oversight, as appropriate. We are working along—we are not completely in the dark.

We are working along a program that has been applied in various contexts—obviously, not identical contexts—in other countries at other times. We are not making it up. We know, broadly speaking, what needs to be done. Of course, if it doesn't work, we will have to ask ourselves why not and address it with other approaches.

But we do have a plan here, and I think it is going to work if it is applied consistently.

Dr. PAUL. But you don't think there is any point where you might say, maybe we went the wrong direction? I mean, what would have to happen to do that? Is there anything?

Mr. BERNANKE. I am telling you, Congressman, I don't believe we will have an inflation problem in terms of consumer prices. If that turns out to be wrong, then I will concede that.

Dr. PAUL. Some people think the Depression ended when World War II started, and of course, others believe it never ended until the end of World War II, when all the bad debt and the mal-investment was liquidated and consumer demands returned. Do you adhere to the fact that the Depression ended—

The CHAIRMAN. The gentleman's time has expired.

Dr. PAUL. You used up some of my time, remember?

The CHAIRMAN. Who did?

No, they start when you start. We will break for the votes. We will come back as soon as possible. Members who are in line—anybody who is back here—I will try to get back very quickly, and I will start recognizing members.

[recess]

The CHAIRMAN. The hearing will come to order.

Mr. Chairman, thank you for putting up with this intermittency here.

And we now go to the Democratic side. Mr. Scott, by virtue of being the only Democrat here besides me, is now recognized for 5 minutes.

Mr. SCOTT. Thank you, Mr. Chairman.

Mr. Bernanke, first, let me commend you on the excellent job you are doing in a turbulent time. I would like to start off—if you could talk about the nationalization issue of our banks and if you could update us on the status of the situation with Citigroup. Could you give us an assessment of where we are within the government's participation and investment in Citigroup? Could you share with us the situation that is developing in reference to preferred and common stock? And could you talk about it in reference to nationalization? Is this the start of it? What constitutes nationalization? Would we consider Citigroup as an example of nationalization as we need it now to move our financial system towards a greater stability? And is this a pattern of things to come within our banking industry?

Mr. BERNANKE. Congressman, let me talk about this in the context of the capital assistance plan that the Treasury has announced and the supervisory review, which we are about to begin undertaking. The purpose of that review is to ascertain whether banks—the 19 largest banks with assets over $100 billion—have sufficient high-quality capital to meet the credit needs of their customers, even in a stressed scenario; that is, in an economic scenario which is worse than even the weak scenario that most private forecasters are currently anticipating. So we will be doing, along with the other regulators, an assessment of all these banks to figure out how much capital they would need to meet even that weaker scenario.

The banks will be told how much capital they will need, if any. Some will not need any capital, but others will. And they will have an opportunity, up to 6 months, to go out and raise capital in the private sector, if they can. If they cannot, then the government will offer them a convertible preferred security, which begins life as a preferred stock, but does not have any voting rights. But as losses

accrue and if it becomes necessary to maintain the quality of capital, then the banks would convert that preferred stock into common. Once it becomes common, then, of course, it has voting rights as other shareholders do. In the case of Citi, we will see how their test works out, and we will see what evolves. If they, in fact, have to convert even the existing preferred into common, then there could be a more substantial share of ownership of Citi by the U.S. Government. But what I would like to clarify—and I tried to say somewhat yesterday—is that this debate over nationalization misses the point.

There are really two parts to the government program. The first is to ensure stability and ability to lend. And that involves supervisory review and providing enough quality capital so that the banks will have the capital bases they need to make loans. But the other part is to use the already very substantial powers that we have through the supervisory process, through the TARP, through any ownership there is through these shares, to make sure that banks do not misuse the capital or continue taking excessive risks. Instead they need to do whatever restructuring is needed—through a new board or new management if needed—and make whatever changes are needed to bring that bank into a condition of viability.

So there is not, it seems to me, any need to do any radical change. Rather we can use the tools we have to make sure that those banks are behaving in a way which is both good for business in terms of long-term viability but is also supporting the economy in terms of lending going forward.

Mr. SCOTT. So I want to get this straight. Are you saying that what we are doing with Citigroup and what will come let's say by the end of this week or the beginning of next week and we look at Citigroup as it is next week this time, would that be an example, an illustration, of nationalization of a bank?

Mr. BERNANKE. I don't think so.

Nationalization to my mind is when the government seizes the bank, zeroes out the shareholders, and begins to run the bank. And we don't plan anything like that.

It may be the case that the government will have a substantial minority share in Citi or other banks. But, again, we have the tools between supervisory oversight, shareholder rights, and other tools to make sure that we get the good results we want in terms of improved performance without all the negative impacts of going through a bankruptcy process or some kind of seizure, which would be, I think, disruptive to the markets.

The CHAIRMAN. The gentleman from Oklahoma.

Mr. LUCAS. Thank you, Mr. Chairman.

Chairman Bernanke, most of the focus of the credit crisis has been centered on the Nation's largest banks and biggest businesses. But there is a whole segment of the financial industry out there that has not received that much attention. That is rural America, where literally we have hundreds of thousands of farms and ranches and small businesses that are located out in the countryside in small towns and small cities, communities.

While the major banks have been a presence in rural America, some kind of define them as a fair-weather friend. In fact, it is the small independent community banks who are the center of credit

availability in most of these communities. Would you touch for a moment on the health of and the status of these institutions? Are they suffering some of the same problems as the major facilities? Are they in a different set of circumstances? Would you expand on that for just a moment?

Mr. BERNANKE. Certainly. The Federal Reserve, of course, supervises many small banks. So we have a lot of knowledge and a lot of experience with these banks. We have always valued the contribution that they make. What the small bank and what the community bank has is the local knowledge, the local contacts, the local information, and they build the local relationships that allow them to make loans that a large bank may not be able to make and to support small business and agriculture and other activities. So we think the small banks and community banks are critical to our system. We are very happy that they are there. We believe they will continue to be important to the system.

Some of them clearly will suffer in this crisis. It depends very much on the decisions they have made. It is true that small banks didn't get involved for the most part in subprime lending, for example. Some do hold, though, concentrations of commercial real estate and other types of real estate assets which may lose value under the current circumstances. So some will be in stress. And we have had some closures, as you know.

But on the other hand, there is, as you point out, an opportunity—to the extent that large banks are withdrawing from some of these communities and they are reserving credit availability to the large customers—for some of these banks to re-establish relationships and to come back in and support the local economy. So I am glad they are there, and I think they will be very constructive.

Mr. LUCAS. Is it fair to say that by the very nature of what their asset base is made up of, deposits, that they have not suffered from some of the same credit seizure problems perhaps as the bigger institutions? And I know that with the downturn in the economy, you have to have a demand for loans, as well as the ability to make loans for the transactions to be consummated.

Mr. BERNANKE. Generally speaking, the small banks are very well capitalized. They typically have higher capital ratios than the large money center banks. That is standing them in good stead. And many of them are in very good condition. And as I said, I expect them to be very helpful in providing credit to local communities. There are some small banks that are under stress, having to do mostly with their real estate loans in distressed areas. So I can't say that the entire sector is completely without problems but certainly many of the banks are very well capitalized and healthy. Some have taken TARP funds; some have not. But whatever the case, they do have, I think, the resources to play a very constructive role in helping the local economies get through this period.

Mr. LUCAS. Because I think it is fair to say from my perspective, of course, that those financial institutions that have been prudent, cautious, have a different makeup in their balance sheet, certainly as we address the needs and the challenges of the institutions that need the attention and focus across the country, let us hopefully not craft, either in Congress or by policy at regulatory institutions, let us not craft policies that penalize the 6,000 or 7,000 who have

been very good stewards in the name of straightening out the problems that do exist.

Just an observation, Mr. Chairman.

Mr. BERNANKE. I agree.

Mr. LUCAS. Thank you, Mr. Chairman.

I yield back.

The CHAIRMAN. The gentlewoman from California.

Ms. WATERS. Thank you very much, Mr. Chairman.

Let me thank Mr. Bernanke for being here today.

Mr. Bernanke, you have indicated in your testimony that you have done a number of things; you have taken a number of steps. First, you outline on page 2 that Congress passed the Emergency Economic Stabilization Act which created the TARP. And then you mention that during this period, the Federal Deposit Insurance Corporation introduced a temporary liquidity guarantee program which expanded its guarantees of bank liabilities. Then the Treasury, in concert with the Federal Reserve and the FDIC, provided packages of loans and guarantees to ensure the continued stability of Citigroup and Bank of America. You mention here that the Federal Open Market Committee basically eased the monetary policy very aggressively so that money is very cheap, zero to a quarter of a percent. Then you talk about, to support housing markets and economic activity more broadly, to improve market function, the Federal Reserve has began to purchase large amounts of agency debt and agency mortgage-backed securities. And then you talk about having established new lending facilities to support the functioning of the commercial paper market and to ease pressures on money market bonds. And then you go into a little discussion of the TALF.

Let me just deal with your participation in all of this. How much money do you have the authority to spend, and where do you get it from?

Mr. BERNANKE. Well, we don't spend it. We lend it.

Ms. WATERS. However you get rid of it.

Mr. BERNANKE. Yes, and so our lending, I want to emphasize, is very short term. It is collateralized, and generally speaking, it makes a profit that we return to the Treasury.

Ms. WATERS. Yes, I just want to know, how much do you have authority to deal with? Where does it come from?

Mr. BERNANKE. The authority comes with our ability to do open-market operations. For example—GSE purchases, take that for an example. Our open-market operation authority allows us to buy and sell agency securities. If we go out and buy agency securities for $1 billion, say, that $1 billion becomes an asset on our balance sheet. To pay for that, we credit the bank of the seller with a billion dollar deposit at the Fed. So the supply—both the assets and the liabilities of the Fed go up by a billion dollars. So essentially what we are doing is creating bank reserves, and the bank reserves provide the cash needed to make those loans.

Ms. WATERS. How much have you injected in all of this limited description that you gave us since September and October?

Mr. BERNANKE. Well, before the crisis began, our balance sheet was about $900 billion, and now it is—

Ms. WATERS. I can't hear you. How much?

Mr. BERNANKE. Before the crisis began, our balance sheet was about $900 billion, and now it is about $1.9 trillion. So we have injected about a trillion in cash lent to mostly financial institutions on a short-term basis but also to the commercial paper market.

Ms. WATERS. So this is money in addition to the TARP and the guarantees that were given by FDIC, etc., etc., etc.?

Mr. BERNANKE. It is an addition, but it is not an expenditure, and it is returned with interest.

Ms. WATERS. Who has returned money with interest so far based on the money that you have lent since September and October?

Mr. BERNANKE. As you know, about 5 percent of our balance sheet is involved in the rescues that involved AIG, for example. Let me put that to the side for just a moment. The other 95 percent of it is the short-term lending, collateralized lending for the most part, to financial institutions, commercial paper issuers, and others.

Ms. WATERS. So how much interest have you received since September and October?

Mr. BERNANKE. I don't have a number, but we give to the Treasury every year tens of billions of dollars.

Ms. WATERS. So you are about to introduce a lot more money under the TALF, is that right?

Mr. BERNANKE. That is correct.

Ms. WATERS. And how do you determine whether or not this money has been effective? You kind of allude to having stabilized some of these markets, but we don't have any proof of it. How are you going to get more proof? How are you going to come to us and say, this is effective?

Mr. BERNANKE. There is a good bit of evidence, ma'am. In the case that you are referring to, the TALF, which is intended to try to free up asset-backed securities markets, we haven't lent a single dollar yet. But in anticipation of that, we have already seen the interest rates on auto loans and credit cards and other asset-backed securities come in, and we are having an impact. We have seen the mortgage rates—

Ms. WATERS. What do you mean the interest rates on credit cards?

The CHAIRMAN. You don't have time for another question.

Let the gentleman finish the answer.

Mr. BERNANKE. I am sorry. The cost of financing auto loans, credit cards, consumer loans, student loans, all of those things, have already begun to improve and that should be passed through to consumers to help expand the economy.

The CHAIRMAN. The gentleman from Delaware.

Mr. CASTLE. Thank you, Mr. Chairman.

Chairman Bernanke, sort of following up on that same line of questioning, I am also very concerned—if you listen to the speeches on either side of the aisle here, you know that we are all concerned about this money getting to Main Street and not Wall Street so to speak, and everyone is concerned about the banks. And obviously, you have done a lot of lending to major financial institutions, as well as major banking institutions, as well as other financial institutions.

But in dealing with, say, Citigroup and Bank of America, maybe the JPMorgan Chase-Bear Stearns connection, do you actually track or have a methodology for tracking how that money is being used? Not just the actual lending, etc., but what is happening to those banking institutions? I have heard you say—you said it in answer to the previous questions, that you see greater activity in terms of car loans and mortgages and etc. Is there a true methodology for this that you at the Fed have? And if so, is that being issued publicly? To me, we need good news out there about money going out to Main Street, and I haven't necessarily seen it. It doesn't mean it is not happening. I am just wondering what, if anything, you are doing or planning to do in that area.

Mr. BERNANKE. Certainly. Well, I mentioned this Web site. And we are providing more and more analysis information. I think I need to once again distinguish very strongly between the rescue efforts like Bear Stearns and the other 95 percent of what we do.

On the rescue efforts, as Congressman Kanjorski indicated before, I believe that by taking those necessary steps, we avoided a much more serious financial meltdown and catastrophic consequences for the global economy. I would want to say, though, that it was with great reluctance and great unwillingness that we got involved in those things. In other countries, the government has been able to do it without the central bank's involvement. We would much prefer to have a system in the United States, a resolution regime or some other sets of rules by which the government can intervene, where necessary, under financially unstable conditions to stop the collapse of systemically critical firms without the involvement of the central bank or with limited involvement. So we did what we had to do there because we felt it was necessary for stability, but we are very happy, if we can find a way, not to be doing that anymore.

On the lending side, as I said, we do evaluate the effects. We look at the functioning of the markets. We look at volumes. We look at maturities. We look at interest rates. And the simple indicators all suggest that these methods have gone beyond the normal monetary policy and are effective.

You know, the—

Mr. CASTLE. Is that being made public? Would the Web site do that, or is it—

Mr. BERNANKE. Well, certainly. And I talked about it in my testimony. We have seen sharp declines in LIBOR, which affects the rates that people with adjustable rate mortgages pay. We have seen sharp declines in commercial paper rates, which affect both high-quality and medium-quality commercial borrowers. We have seen stability in money market mutual funds, which many people have investments in. And we have seen, even without the issuance of any loans yet, we have seen improvements in the funding costs for credit cards and consumer loans, student loans and small business loans. So we do believe that we are having a benefit—it used to be the view that once you got the interest rate to zero, the Fed was stuck. But we have found ways to go beyond that and to improve the economy, strengthen the economy for average people with new methods.

The CHAIRMAN. The gentleman will suspend.

Please freeze the clock. I am going to stay here. Members can go vote. We are going to keep going. It is a motion to proceed. I will not characterize its importance, but we are going to keep going. So I would advise members to go and come back. I would like to keep going.

So we will now resume with Mr. Castle. Anybody who goes and votes, if you are back here, we will call you in that order.

Mr. Castle, resume with the full amount of time remaining for you.

Mr. CASTLE. Thank you.

Chairman Bernanke, I am also concerned about the toxic assets. I mean, that was the original premise under which we created and voted for the TARP program, and yet nothing seems to have fundamentally happened in that area. Is there a plan to deal with that? Should it have been done sooner? Where does all that stand at this point?

Mr. BERNANKE. Yes, sir, that is a very good question. I do believe that taking toxic assets off the base balance sheets is an important component of creating the clarity needed for private capital to come back into the banks. It is true that TARP 1 did not do that mostly because of the crisis that Congressman Kanjorski talked about that required the immediate injections of capital to stabilize the system.

However, the current Treasury plan unveiled by Secretary Geithner has an explicit component which will use public-private partnerships to buy assets in specific categories. And so that will be part of the multipronged plan to provide capital, to provide supervisory clarity and to take assets off balance sheets. So that is very much under way, and I anticipate that the Treasury will be providing more detail in the coming days and weeks.

Mr. CASTLE. Thank you, Mr. Chairman.

And I yield back the balance of my time, Mr. Chairman.

The CHAIRMAN. The gentlewoman from New York, Mrs. Maloney.

Again, members go vote, come back; we will still be here. There is only one vote.

Mrs. MALONEY. Thank you very much, Mr. Chairman, for your testimony and your superb work during this financial crisis.

Last night during President Obama's address to the Joint Session of Congress, one of his statements that got great support from both sides of the aisle was when he said that the bank bailout program is not about helping banks; it is not about—I am dead. It is not about helping banks.

The CHAIRMAN. You may have kicked it out. Move to that microphone.

Mrs. MALONEY. It is not about—I am just going to talk. It is not about helping banks—

The CHAIRMAN. That is not fair to the recorder. Please move to that chair. We have a recorder who is listening on the tape.

An extra 15 seconds. Go ahead.

Mrs. MALONEY. One of his comments that got a great deal of support on both sides of the aisle was that the bank bailout was not about helping banks; it was about helping people. And I would like to hear your best case on that statement.

Also, since time is limited, I would like to place in the record and give you a series of letters that have come to me with questions on

certain aspects, systemic risk, exactly where the TARP money is going, whether or not it is addressing systemic risk, but one in particular from economist and noble laureate Joseph Stiglitz. He says that we have to devise clear rules about when we will bail out institutions and when we will not. And I would like to ask you, at what point does a financial institution move from too big to fail to too big to save?

And many of your statements yesterday before the Senate were reassuring to many, but you testified that you did not feel that any institutions needed to be nationalized, financial institutions in our country, that they were—that they were stable and economically viable. Some of my constituents wrote and asked exactly what is your definition of nationalization. And again, what is the marker or guidelines between too big to save and too big to fail?

The CHAIRMAN. Without objection, the documents the gentlewoman alluded to will be made a part of the record.

The CHAIRMAN. Mr. Bernanke.

Mr. BERNANKE. Thank you.

So the point about the need to protect banks in order to protect the public, I think, is a very good one. We have enormous experience with banking crises and we know that there are effects on the real economy that we have just seen can be very bad. Unfortunately, as someone put it, you can't save the banking system without saving banks. So we do have to intervene to try to stabilize the banks, and that is critical to do.

As I have already discussed, I think that the intervention in October prevented a collapse of the global banking system which would have had extremely severe effects on the global economy, and it would have taken it a very, very long time and much more money to get out of. So I think the first accomplishment of the Congress's approval of the TARP funding was to avoid that absolutely catastrophic situation.

Beyond that, the capital that has been distributed to banks has been reducing the pace of deleveraging, of selling off loans and allowing them to stabilize their credit extensions. And as we go forward, particularly as the Fed begins to work on nonbank credit sources like asset-backed securities, we will see improving loan availability.

The Treasury plan includes a number of ideas about regular reports, baselines, analyses that the banks receiving TARP funds will have to provide to give some indication that, in fact, they are using the extra capital they have to support new lending. So we will be getting evidence on that as best we can, although it is always going to be difficult to get a very precise reading.

I think, with respect to nationalization, I think of nationalization as being a takeover of the banking system or banks by the government.

Mrs. MALONEY. 100 percent?

Mr. BERNANKE. 100 percent, zeroing out stockholders and then putting the government in charge of running the institution. I don't think we want to do that. I don't think we need to do that.

We may have government ownership shares in some of the banks, and we will, of course, as government owns shares. But as I have said before, I do not in any way support letting the banks

do what they want or continuing as zombies or just not doing their appropriate role in the economy. But I think we have the tools, short of those Draconian measures, to make sure that banks return to viability and to extending credit to the public.

With respect to choosing when to prevent the failure of a systemically critical institution, we are making those judgments as we go along. Obviously, we are in the middle of a financial crisis. The bar is going to be lower today than other times. I am very much in favor of creating a systematic regime for making those determinations and for addressing those situations in the future.

The CHAIRMAN. The gentleman from California.

Mr. ROYCE. Thank you, Mr. Chairman.

I would like to ask you, Chairman Bernanke, as we have seen in recent months, institutions posing a systemic risk can come from any number of sectors within our economy. They can come from investment banks or commercial banks or the insurance sector or government-sponsored enterprises.

As you know, with respect to the insurance sector, we presently have a regulatory structure comprised of 55 individual State regulators without any Federal oversight. And I would like to ask, in your opinion, is someone likely to be integrally involved in mitigating that systemic risk as we go forward? Is it logical for us to have a newly created macro credential regulator coordinating with 55 individual regulators, or should the systemic risk regulator have a Federal companion to work with as they do in banking or in securities?

Mr. BERNANKE. Well, the issue of the option of a Federal charter for insurance is a complex one, and there are a lot of issues involved. But to cut to the bottom line, I think that it would be a useful idea to create a Federal option for insurance companies, particularly for large, systemically critical insurance companies. And in general, I believe that holding company-level supervision of large systemically critical institutions is very important. We do not have effective holding company supervision in some of the cases where we have had problems. So I do believe that an optional Federal charter would be a direction worth giving serious consideration.

Mr. ROYCE. Thank you, Mr. Chairman.

I have a second question, and that is, during the stimulus debate, the Congressional Budget Office projected that the Federal Government is going to need to issue $2 trillion worth of Treasury bonds in the coming months. Now, the bond market in the past has not seen anything like that over such a short period of time. And I guess the estimate is, during the next 2 years, you might have $4.5 trillion of U.S. debt that would be issued. Foreign buyers today absorb, I think, about $200 billion a year of the Treasuries that—you know, that is a useful contribution if the deficit is $459 billion. But if it climbs up towards $2 trillion, my question to you is, then, the annual purchases would be about a 10th, and would domestic investors be able to bridge that gap? It looks unlikely from what I have read on this. So who would be there to buy up the debt? And I would ask if you are concerned that those parties just won't be there in the future.

This is part of my concern about the Japanese model in terms of trying to handle this through spending stimulus. I think they

put about $1.3 trillion out there; and at the end of the day, they just accumulated more debt, but it cost them a decade of stagnant economic growth.

Could I have your response on that, Mr. Chairman?

Mr. BERNANKE. Congressman, you are certainly right to be concerned about the debt and the deficits. In terms of the short term, the global market for U.S. debt seems to be accepting of this issuance; rates are not high, and liquidity is good. Generally speaking, even though there is greater supply, there is also greater demand because U.S. Treasuries are viewed as a safe investment in a world where there are not very many safe investments left.

That being said, as I have emphasized and as the President emphasized last night, we certainly cannot continue to borrow at this rate or to run deficits at this rate. And it is going to be essential as the economy recovers, that we bring the deficit down and that we get ourselves back to a more fiscally balanced situation.

Mr. ROYCE. Well, even if you were able to inverse the savings patterns of Americans and get it up to let us say 8 percent instead of zero a year, that would probably only be about $800 billion right there of additional savings. So you would have to go elsewhere, wouldn't you, for the borrowing that we are talking about?

Mr. BERNANKE. Yes. But you have global financial markets on the order of $100 trillion, and there will be capacity in those markets to absorb debt in the short-run but only if investors believe that the United States is on a sustainable fiscal path, which obviously trillion dollar deficits as far as the eye can see would not be sustainable.

Mr. ROYCE. Thank you, Mr. Chairman.

The CHAIRMAN. The gentleman from Kansas.

Mr. MOORE OF KANSAS. Thank you, Mr. Chairman.

Mr. Chairman, in these difficult times when my constituents are anxious and frustrated with the state of our economy, transparency is very important, and it is important to communicate what actions were taken to protect U.S. taxpayers. I appreciate the steps that the Fed recently announced and you mentioned in your testimony to increase transparency.

Another important issue that came up at our O&I hearings yesterday was the potential oversight blind spot that may exist at the Fed. In particular, I have concern that there is a lack of oversight of TARP funds that passed through the Fed, and I understand that the Fed's TALF program will use TARP funds to lend up to $1 trillion to thaw consumer lending markets. The acting Comptroller General, Gene Dodaro, yesterday expressed concern of the GAO's ability to oversee TARP funds passing through the Fed. He said, "There may be some limitations in our ability to provide that type of oversight," adding that is a concern of his.

What oversight powers does the GAO and the SIGTARP have over TARP funds that pass through the Federal Reserve programs like TALF? Independence at the Federal Reserve is very important, and that is true. Independence is important for the Fed. But when the Fed invokes emergency powers through Section 13.3 of the Federal Reserve Act and greatly expands its balance sheet, what are your thoughts about adding emergency oversight authorities of the Fed to better track the use of TARP funds?

Mr. BERNANKE. Congressman, I am frankly not aware of any limitations on the Inspector General or the GAO in terms of that evaluation. The issuers of the ABS that will be sold under the TALF are subject to the same compensation restrictions and all the other rules that apply to any TARP recipient. We have set up a system where firms have to certify and be audited to the effect that they are meeting both the rules of the TARP and that they are correctly representing the assets that they are putting into these ABS. We have taken a number of steps to safeguard the taxpayer, to protect both the Fed and the Treasury from credit risk in this program. And I don't want to take all your time, but I can certainly go through them. And in particular, we have addressed all the specific issues that the Inspector General raised.

But if there are remaining issues, I have met with Mr. Barofsky in various contexts, and I would be very happy to go through it with him. Part of the reason we have delayed the initiation of this program is that we have wanted to make sure that all of our legal and procedural steps had been taken. And we are absolutely committed to making sure that we meet all the requirements that will protect the taxpayer.

Mr. MOORE OF KANSAS. Thank you very much, Mr. Chairman.

Mr. WATT. [presiding] Mr. Hensarling is recognized.

Mr. HENSARLING. Thank you, Mr. Chairman.

And, Chairman Bernanke, welcome once again. I would like to add my voice to that of the chairman and the ranking member and say that although it is our responsibility to ask you tough questions, it doesn't mean that we do not appreciate your service. It does not mean that we necessarily second guess your judgment in exigent circumstances where we don't have all the facts. But certainly as Members of Congress, we reserve the right to do so.

The first question I have, Mr. Chairman, is, I have a very strong preference as we try as a nation to work out of our economic turmoil, I have a strong preference for the use of voluntary capital of investors over involuntary capital of taxpayers. Although I don't have any statistical evidence, I have spoken to many individuals and firms within the investment community. And the word that keeps on coming up over and over and over is certainty; we need certainty. We need certainty. We need certainty in legislation. We need certainty in regulation. I am under the impression there are billions, if not trillions, of dollars sitting on the sideline. But until policymakers in Congress put out a program and say, this is the program, people are still trying to figure out, am I going to get bailed out? Is my competitor going to get bailed out? Is my customer going to get bailed out?

And I suppose in that vein, I would like for you to comment generally. Unfortunately, there is a two-part question here. But, specifically, I think you have embraced, at least in your testimony on the Senate side, you said something along the lines that the plan recently announced by Secretary Geithner would be quite helpful in stabilizing our economic situation. And I don't try to read too much into 1-day swings in the market, but it was a bad 1 day when that was announced because I think the market viewed it as a non-announcement. And I heard one critic call it $350 billion in search of a program.

So the specific question would be, do you have details of the program that the rest of us do not have, or do you believe that the market simply doesn't understand the clarity with which and precision in which it was presented? So there is a general and a specific question somewhere in there, Mr. Chairman.

Mr. BERNANKE. Thank you, Congressman.

On the uncertainty issue, I think we shouldn't lose sight of the fact that the fundamental source of the crisis is the collapse of the credit boom and the fact that banks and financial institutions are losing enormous amounts of money. Given the enormous losses, given the weakness of the economy, it would be surprising if investors felt that the situation was a safe one for them to be investing in.

Having said that, I agree with you that more certainty in policy, the sooner, the better, will be good for bringing more private capital back into the system. And I do believe that the Treasury program is an important step in that it is a comprehensive program. It has different components that taken together and executed properly, I think, will be very helpful in stabilizing the banking system and making it more attractive for private capital to come in.

Your question, though, was whether the plan that was announced a few weeks ago was a fully formed plan? Obviously it was not. It was a broad proposal, a conceptual proposal, which the Treasury put out to indicate the direction it wanted to go and to invite discussion with Congress and with the public. It was not entirely specific, obviously, and more details are being released as soon as the Treasury can do so.

The Treasury, frankly, is understaffed and the Federal Reserve and other agencies have been working with them as best we can to try to get the details together. Obviously, I have been in many discussions, so I have some idea where these things are going, and I find the directions very promising. But I am not at this point able to tell you much because I am still waiting, obviously, for the final decisions and for the Treasury to make those announcements. But there is, of course, a great deal of work being done to flesh out the general ideas that were presented initially.

Mr. HENSARLING. Chairman Bernanke, we all know that those who do not learn the lessons of history are condemned to repeat them. And fortunately for the Nation, we know that you are an astute student of economic history, particularly our own Depression, but also Japan's lost decade.

I have a copy of a speech that you gave before the Japanese Society of Monetary Economists back in May of 2003 where you talk about the economic principle of Ricardian equivalence. And in that speech, you said, "In short, to strengthen the effects of fiscal policy would be helpful to break the link between expansionary fiscal actions today and increases in the taxes that people expect to pay tomorrow."

You also indicated that the government's annual deficits, speaking of Japan's government's annual deficit, is now 8 percent of GDP and is a serious concern. Moreover, an aging Japanese population will add to these budgetary concerns.

Are you in a position to comment on its application to our situation today?

Mr. WATT. The gentleman's time has expired.

Mr. HENSARLING. Perhaps we could get that in writing at a later time, Mr. Chairman.

Mr. BERNANKE. The deficits have significant consequences. And one of the consequences is concerns about the future servicing costs of those deficits. I agree with that.

Mr. HENSARLING. Thank you, Mr. Chairman.

Mr. WATT. I will recognize myself for 5 minutes.

I was going to skip over and go to Mr. Capuano, but I will follow along Mr. Hensarling's line because one of the things that I think is important for us to do is to focus on exactly what has been done as a means of the public and the markets understanding the totality of what has been done. And I note, on page 7 of your testimony, that you make the following statements: "If the actions taken by the Administration, the Congress, and the Federal Reserve are successful in restoring some measure of financial stability, and only if that is the case in my view, there is a reasonable prospect that the current recession will end in 2009 and that 2010 will be a year of recovery." And you were quoted yesterday on the Senate side as saying something similar to that, although a lot more basic when it was reported in the newspaper.

I take it that the totality of the congressional actions is TARP, the stimulus, the second tranche of TARP, what we are contemplating doing with bankruptcy reform. The Administration's role is how it actually administers the moneys that we have authorized and appropriated on the congressional side, and the Fed's role is the trillion or so dollars in increased assets on your balance sheet and the multiplier effect that is associated with that, because a lot of it is guarantees and allows lenders to do other things.

I guess the question that I have is the same one that I asked in my opening statement: Are there other things that you contemplate that Congress can and should reasonably be considering at this point, not to comment on the merits or lack of merits? And except for fleshing out, as Mr. Hensarling has indicated, the specifics of the proposal, what other tools does the Administration have and what other tools does the Fed have, or is it sufficient in your view what has already been done at this point?

Mr. BERNANKE. In terms of the immediate crisis, I think that we are on the right track. We have taken a lot of constructive steps. I just asked for Congress to provide support, provide oversight. And as these programs go forward, if they need additional support, to consider that, but we don't know yet whether they will or not. So I think—

Mr. WATT. It might be in the form of additional funds.

Mr. BERNANKE. Exactly. So I think that we are making good progress in terms of the immediate crisis. But there is a lot of work for Congress to do in terms of going forward. I think part of this is, we want a guarantee, at least to assure the public that this is not going to happen again and give some confidence that that is not going to happen again. So there is important work to be done.

We talked several times today about a resolution regime for large, systemically critical firms, but regulatory reform that will begin immediately to try to improve risk management, to try to reduce systemic risks, I think those steps would be confidence-inspir-

ing and I would advocate that Congress would begin looking at those very soon.

The Treasury and the Federal Reserve would like to work with Congress on ways in which the Fed can better control the money supply, given the amount of lending it is doing. Those are issues we can talk about separately.

But broadly speaking, I think support for the program that is currently going on to arrest the financial crisis and then address going forward the changes in the structure of the financial and regulatory systems that we are going to need to assure future stability.

Mr. WATT. As far as you are concerned, the things that we have put in place already are the things that are reasonably appropriate to the severity of the situation right now?

Mr. BERNANKE. In terms of the immediate crisis, yes.

Mr. WATT. Thank you.

Ms. Biggert is recognized.

Mrs. BIGGERT. Thank you, Mr. Chairman.

And thank you, Chairman Bernanke, for being here. I understand that the Federal Reserve and the Treasury have announced that TALF will be extended to CMBS. And I have heard that many market participants have raised concerns that TALF only includes new and recently originated loans, when the CMBS has seen virtually no market activity in the last year and that institutions don't have the balance sheet capacity for new lending or refinancing to qualify under TALF. Given this reality, doesn't there need to be a catalyst, whether in or outside of TALF, to address the legacy assets, the outstanding issuance and balance sheet capacity issues before TALF can be truly effective?

Mr. BERNANKE. Congresswoman, we will be focusing on newly issued asset-backed securities, but they could be backed by refinances, for example. So they need not be loans to finance new construction. They could be loans to finance ongoing ownership or management of commercial real estate properties. So I do think we will address that problem in the sense that loans that are refinanced, for example, and then resecuritized would be eligible for the TALF.

Mrs. BIGGERT. So let us say they don't have the balance sheet capacity or the certainty of a secondary market. Have you considered some form of bridge financing or guarantee assistance to give institutions a window to start commercial lending?

Mr. BERNANKE. Let me emphasize that we will be doing a lot of talking with market participants. We will hear all these issues, and we will listen and respond to them. I believe the TALF program, plus our measures to provide liquidity to financial institutions, are an important contribution towards stability in that market. But I would mention again that part of the Treasury program is an asset purchase facility that would buy even legacy assets which have not been recently issued or rated from institutions. So between those 2 things, I think we have a pretty comprehensive plan. But I just want to reassure you that, just as we did with the first round of TALF, we will consult closely with market participants, and we will make adjustments as needed to ensure that it is an effective program.

Mrs. BIGGERT. But when there has been no market activity in the last year, how are they going to be—it would have to be the refinancing then. There wouldn't be any new or originated—

Mr. BERNANKE. Yes, it would be—there is market activity in terms of new construction and new projects still going on, but in addition, refinances and existing properties that are securitized would be, as I said, eligible.

Mrs. BIGGERT. What I see is that CMBS lending went from $240 billion in 2007 to $12 billion in 2008, which is really historically low.

Mr. BERNANKE. It is practically zero now, and you put your finger on the problem. People talk a lot about credit availability, and part of it is the banking system certainly. But the biggest part of it is the drying up of the securitization markets, not just for CMBS, but for a whole variety of other types of credit. And the Fed has been focused on trying to get those markets going again, setting them up in such a way that when markets begin to recover, that the private sector will come back in. But for the time being, with no activity, the Fed wants to be there to try to help credit flow.

Mrs. BIGGERT. And you are going to expand TALF to about, what, $1 trillion?

Mr. BERNANKE. This is a joint Treasury-Federal Reserve program, and our agreement was to move towards $1 trillion, considering CMBS and possibly other asset-backed securities following that, yes.

Mrs. BIGGERT. Do you think that such loans would increase the percentage of risky assets that you hold, the Federal Reserve would hold?

Mr. BERNANKE. We have gone through a number of steps to ensure that we are well-protected financially, including keeping the assets simple, requiring that they be purchased by private sector parties who have a strong interest in making sure they are properly valued, putting on a haircut so that the amount we lend is 5 to 15 percent below what the purchaser paid for them and other protections including, of course, the capital being provided by the Treasury, which is the first loss position. But our anticipation is, from the Federal Reserve's point of view, that the credit risks are quite low.

Mrs. BIGGERT. Thank you.

I yield back.

Mr. WATT. Mr. Ackerman.

Mr. ACKERMAN. Thank you, Mr. Chairman.

Thank you for providing leadership during these very perilous times, Mr. Chairman.

I spent part of the break reading nursery rhymes to one of my three very young grandchildren. And I got to the page about, this little piggy went to market, and this little piggy stayed home. And before I started reading it, I was struck with fear. What if my grandsons thought of asking questions? Was it a good time for that little piggy to go to market? Was the little piggy who stayed home a lot smarter? What if he heard that, after they did away with the uptick rule, a bunch of other little piggies actually ate the market? And was there really a market to go to? And I figured you are the country's most important economist; maybe I would ask you some

of those questions that I was afraid to answer before I turned to "Mary Had a Little Lamb" real quick.

The uptick rule has wreaked havoc in the view of many of us should that not be restored. And the second question I would like to ask is about mark-to-market. If there is no market, how can you have mark-to-market? If the market is based on as much today as emotion, how can we put so many companies in peril of existing when there is no market to mark to and the market is so artificial relative to the real value of so many companies that are now jeopardized? And if so many of the structured packages that are out there in the financial community contain mixed products, some of which have to be mark-to-market and some of which don't, how does somebody make a decision as to whether or not to invest? I was hoping you could share some of your thoughts with us because I obviously think that mark-to-market is a disaster, and that we have to restore the uptick rule.

Mr. BERNANKE. Well, those are very good questions and obviously very pertinent.

On the uptick rule, obviously that is an SEC responsibility. I know that they have been looking at it and thinking about it. The traditional literature on this doesn't seem to find much effect of the uptick rule. But I have to concede that in the kinds of environment we have seen more recently, that if it had been in effect, it might have had some benefit. So the SEC is looking at that.

Mr. ACKERMAN. Restoring it would have some benefit?

Mr. BERNANKE. Restoring it. That is my understanding. But, obviously, that is their decision, and they will have to make a determination as to whether it is beneficial.

Mr. ACKERMAN. The reason I am asking is, you are a smart guy. And we need smart people to weigh in and give us some guidance. Some of us have legislation, and we are asking a lot of smart people what they think of the notion.

Mr. BERNANKE. Well, the SEC is, of course, responsible for this, and they have a lot of experts, and they are looking at it very carefully. My sense is that it is worth looking at, and I would say that to the new Chairwoman if she asked me about it.

The second is the mark-to-market issue. It is a very difficult question. Of course, I think, in principle, we always want to make sure that firms are valued as accurately as possible. It is good for investor confidence that they think they are seeing the true value of the underlying firm. And certainly for many assets, which are actively traded, for example, we want to know what the market value is as opposed to some historical or book value. And that is what mark-to-market accounting was about.

However, it is absolutely the case that under certain circumstances, when you have markets where the asset is not traded or is very thinly traded, then it is very difficult to use market information to adjudge what the appropriate value is. And that makes the mark-to-market approach very difficult to execute in a sensible way. And I don't have any answers for you. I don't think we should junk the system. I think we do need to do what we can to provide good transparent information to investors, but I would also support the efforts that SEC and FASB are doing to look at mark-to-market

and to try to provide reasonable advice about how to value assets where there is no market.

Mr. ACKERMAN. Let me just finally—if I might just finally say, Mr. Chairman, that there—some of these little piggies are big piggies, and they weren't investors. And the uptick rule is connected to the mark-to-market and that these people out of sheer greed—

Mr. WATT. The gentleman's time has expired.

Mr. ACKERMAN. Driving down the real value of the companies in the market, but the value of the company was there, creating a completely artificial system which is going to ruin our whole financial system and investors' confidence.

Mr. WATT. Mr. Garrett is recognized for 5 minutes.

Mr. GARRETT. Thank you, Mr. Chairman.

I thank the Chairman as well.

Before I begin, I would just reiterate a point that I raised the last time you were here, and that was to your point of transparency, we would like to get as much information as possible. Back in the first week of December, we sent a letter to you listing a number of questions to be answered. And I just bring that to your attention again. We need to move on some of these issues. You say we need to look to regulatory reform and the like. We need all the information as possible. If you could just check with your office.

Mr. BERNANKE. You have not received the reply?

Mr. GARRETT. No.

Mr. BERNANKE. After some concerns about this, I have asked the staff to try to put a 1-month limit on reply times, and so clearly that has not been met in this case, and I will check up on the situation.

Mr. GARRETT. I see your staff shaking their heads. Do they think that we received a reply? They think we did. If we did? Okay. If not, I would appreciate it. I appreciate the gentleman from New York raising the questions I was about to ask. So I will just give a sliver on that question on mark-to-market.

The folks who support mark-to-market would say we already have that provision in the law right now that allows for the flexibility to make these determinations, but what we know is, in practice, it just does not occur. And so that is why we need probably more push, if you will, in order for them to change the—not just the advice, but the actual practice to get to a sound judgment rule.

Let me go to what was in my opening comment, which you touched upon. I appreciate that. The pushback always is on this issue, when we say, well, foreclosure is the problem; why should my homeowners subsidize the guy across the street? And the answer always is, as you alluded to as well, because his foreclosure is going to affect me and my street as well. Well, if you look to—I mentioned Professor Shiller's comment—study on this. He said in his study that the impact of foreclosures on prices while negative and significant, can be significant, it is quite small in magnitude. In other words, we are referring to the fact, as you well know, that this foreclosure problem that we have nationally is really centered in four or perhaps five States.

He says even under extremely pessimistic scenarios, house prices likely would decline only slightly or remain essentially flat in re-

sponse to foreclosures like those predicted in 2008 and 2009. This suggests that home prices are quite sticky.

And in an article written by—give credit where credit is due—Alan Reynolds, they make a point of the fact that foreclosure can be a personal crisis, but it is not a national crisis. Meaning that, for example, foreclosures on the mean average is 1 home in every 466; but in the State of Vermont, for example, it is 1 in 51,906. All of this suggests that maybe what I am doing in my State of New Jersey is basically subsidizing those people in the other States and that it is not something that we should be asking everyone to support. Can you respond?

Mr. BERNANKE. Well, the evidence on the effect of foreclosures on national home prices is somewhat contentious, but there are certainly good economists, including Mr. Shiller and others, who think that the effect on national home prices is not very large. The example you gave of being across the street, though, there is very strong evidence that the neighborhood is affected, if not the entire economy.

Mr. GARRETT. Well, actually, I would like to interrupt there. Something that I just heard from an expert the other day on that point is it is not necessarily foreclosures on your street but abandoned properties on your street which will have the more significant impact.

Mr. BERNANKE. True, true.

Another issue which we have confronted is that we often see that the foreclosure decision is made by a servicer rather than the original lender. And the servicer's incentives may often be to proceed to foreclosure, even if in some broad economic sense there may be an efficiency gain from negotiating some kind of restructuring agreement. So that is another possible area where there may be an inefficiency in the market's arrangements.

But I agree, that there is controversy on these issues.

Mr. GARRETT. And the one area that the President seems to focus on is those properties that are underwater and that they are having the most difficulty to go into. And the notes from sort of Mr. Alan's article is that over the other 40 States have a below average percentage of homes that are less than their mortgages are under water. So, again, when we talk about these things in the larger picture, it sounds like a national crisis, but we really have to pin them down.

One last point, just totally off this page, what the definition of nationalization is, I appreciate what your answer is on that. You had previously said we would have substantial influence as a minority holder in this, which I guess could go to executive compensation, perhaps.

Mr. BERNANKE. Yes.

Mr. GARRETT. Dividend distribution, I presume—

Mr. BERNANKE. Let me just be clear. We can make strong suggestions about dividends, for example, just from a supervisory perspective.

Mr. GARRETT. Right. How about other aspects? Hiring practices, can that be something that you would be able to use in your powers to address?

Mr. BERNANKE. The supervisors, the TARP, the ownership would allow the government to require policies of various kinds relating to compensation, relating to hiring and so on. I think it is very, very important—I think you would agree with me on this—that we don't want the government involved at levels of business operations, making loans, making those kinds of decisions. But at the level of overall business planning, dividends, things of that sort, I think, as a shareholder and as a supervisor, there is a legitimate basis for that.

The CHAIRMAN. Because the time has expired and because we are at a point of agreement between you and the gentleman from New Jersey, I think it is propitious to move on.

The gentleman from California.

Mr. SHERMAN. Thank you, Mr. Chairman.

I would want to pick up on what Mr. Ackerman said. We do need the uptick rule. And as to mark to market, does it make sense to mark to market once marketable securities that are no longer marketable while refusing to ever mark to market those loans that have never been marketable? To mark to market that which is no longer marketable while not marking to mark up that which has never been marketable seems paradoxical at best.

As to what Maxine Waters was talking about, you do have under section 13-3 unlimited power to lend money—an unlimited quantity of money that you can lend on security that the Fed finds adequate. You have indicated that so far you have expanded your balance sheet only $1 trillion. But I hope you would provide for the record a list of the commitments that the Fed has made that could go well beyond that and the guarantees the Fed has issued in addition to amounts loaned.

The New York Times, for one, is saying that government actions, chiefly the Fed, add up to over $8 trillion. And it would be interesting to be able to compare their reports with your analysis of the risks the Fed has taken and the loans the Fed has made or anticipates making.

As to nationalization, it seems like the ghost of Eugene Debs is amongst us. Until you actually look, nationalization is probably a term that would be used for what we are going to do for those banks that would otherwise be in bankruptcy or receivership.

Now with regular bankruptcy or receivership, only FDIC deposits are made safe by the government. In contrast, nationalization seems to be a code word for bailing out the bondholders, which would cost hundreds of billions or trillions of dollars. And, in that way, nationalization is a slogan that could be used to say, oh, my God, we on Wall Street hate it. It is terrible. It is left wing. But it is really a way to bail out the bondholders of those banks that have failed so badly that we have given up on bailing out the shareholders.

I would hope that anything approaching nationalization means that we go through receivership, and then we give—you know, there is the reductions of the unsecured creditors; and then maybe we take over the bank or maybe we don't. But the idea of using the term nationalization to justify bailing out bondholders seems counterintuitive and probably a mistake.

As to AIG, there are reports that they have a fourth quarter loss. I would like you to answer for the record how certain you are that the Fed has not lost any money on the AIG transactions you have engaged in so far. And then do you think that there is adequate security somewhere in AIG to allow you to make relatively risk-free additional advances to that entity?

As to the stress test, I hope that you would respond for the record why you are going to use tangible equity capital, rather than tier one capital. And more importantly, given the severity of the economic problems that we have had over the last—more than a year, I think, why was this stress test not something being done by the bank regulators? Why is it something that the new Administration is doing? I would think stress testing is what you do every day.

I hope that we have time for an oral response to my last question, relates to your efforts to urge the banks not to pay dividends. Congress, Treasury, and the Fed have all begged and implored the banks on the issues of compensation, perks, and dividends; and the issue is then why are we begging? Why are we imploring? Why are we embarrassing them? Why aren't we telling them what to do?

Are you prepared to go beyond asking the banks not to pay dividends, to say that you will not engage in future transactions with banks that have Federal money and then still pay dividends? And when I say transactions, I mean the new transactions of this post-September world, not the ordinary business you were doing in 2007.

Mr. BERNANKE. The regulators jointly issued in November a statement on lending to creditworthy borrowers which addressed a number of these issues, including dividends, and we said that we would be reviewing policies about dividends with respect to capital adequacy and the like.

I think your point is very well taken. The firms that particularly need government assistance or are short capital you know should be paying little or no dividends, and that is certainly an appropriate policy. We will be looking at that very seriously.

The CHAIRMAN. The gentleman from Texas.

Mr. NEUGEBAUER. Thank you, Mr. Chairman.

I want to cover a couple of bases here. First of all, on your swap lines, is that number about half-a-trillion now? Is that pretty close?

Mr. BERNANKE. That is about right, yes.

Mr. NEUGEBAUER. Could you furnish me a list of the countries that you are involved in swap lines with?

Mr. BERNANKE. Yes. It was in a recent testimony that I gave that list. But yes.

Mr. NEUGEBAUER. Is Ukraine one of those countries?

Mr. BERNANKE. Which?

Mr. NEUGEBAUER. Ukraine.

Mr. BERNANKE. No.

Mr. NEUGEBAUER. Because a number of these countries, obviously you know their creditworthiness is falling. And are you concerned in any way that the U.S. arrangement with these entities could be in jeopardy where you could lose money?

Mr. BERNANKE. We are not. We have not been involved with wide numbers. We have dealt mostly with industrial countries in which we have a lot of confidence.

Mr. NEUGEBAUER. Thank you for that. And I will look forward to that list.

[The list referred to above can be found on page 136 of the appendix.]

Mr. NEUGEBAUER. It has been publicized that this—you are going to go in and do a stress test on the banks, and some people are talking about what will be the best way to evaluate the conditions of these banks. And the tangible common equity seems to be coming up is maybe that is a better indication.

One of the things that I have done today is dropped a bill that would preclude the Treasury or the Fed from buying common stock. Now if we are going to put taxpayers at risk, they should be in a preferred equity position and not be diluted by being made a common shareholder. But I understand that there is some discussion where there is some thinking that you would actually—for example, in Citibank, that you are thinking about buying common shares there. How do you justify that?

Mr. BERNANKE. The Federal Reserve has no authority, and it is not going to be buying any common shares.

Mr. NEUGEBAUER. But as a part of the TARP program, is the Treasury—

Mr. BERNANKE. The Treasury has already discussed this in their initial rollout, which is that they propose to be issuing convertible preferred securities, which are initially preferred. But if the stress tests shows or as time goes by and losses accumulate and the bank needs more common equity as part of its overall common structure that those preferred shares would be converted into common.

Mr. NEUGEBAUER. Why would we do that?

Mr. BERNANKE. Well, on the one hand, we need that to strengthen the banking system so that they will be able to make loans and support the economy.

In terms of government protections of taxpayers, obviously, the terms in which they are converted—and there are other aspects of that, including voting rights—will be relevant to that. The Treasury, I believe, is working on features that will make the shares attractive from an investment perspective as well as from a financial stabilization perspective.

Mr. NEUGEBAUER. But I don't understand why we would put the American taxpayers' dollars at the bottom of the food chain. In other words, if we are going to beef-up the capital and we have made substantial capital infusions into these entities, why we would now move away from some of the protection that is enjoyed by the preferred to a common entity. I am having trouble following that logic.

Mr. BERNANKE. Well, it is simply the concern that the preferred equity shares have reached their limit and usefulness and that in order to provide enough "high-quality capital," these companies need more common equity.

Mr. NEUGEBAUER. I think the question is, depending on what standard that you are using and if you are using a standard that

is not giving those entities credit for the equity that we have already put into those entities, isn't that somewhat self-defeating?

Mr. BERNANKE. No. Our regulatory standards include the preferred stocks from the government as tier one capital. But there are two considerations. One is that our rules also specify that "the preponderance of tier one capital should be common." That is one consideration that is in our existing rules.

But, secondly, the markets have also shown a very strong preference for common in terms of trusting the capital bases of these banks. So those two considerations have played into these determinations, but I leave it to the Treasury to further explain and explain how they are going to provide protections.

Mr. NEUGEBAUER. Here is the problem. If you go in and you do a stress test on a large bank and you have a determination this bank fails the stress test and you go and put taxpayers' money in as additional common equity, how in the world do you think they are ever going to attract any additional capital?

Mr. BERNANKE. Because the amount of capital that goes in will, first of all, be enough to make the bank well capitalized, not only well capitalized but have enough capital that they will be able to stay well capitalized even in a more adverse economic scenario than is currently expected by private forecasters. So that is the first thing.

The second thing, once banks are stabilized, then other measures, including, for example, the asset purchase program, will take some of these hard-to-asset values off their value sheets.

Those two things together ought to make banks more attractive to private investment. As the private investment comes in, there are provisions which will allow the public investment to be replaced by the private investment.

The CHAIRMAN. The gentleman's time has expired.

The gentleman from New York.

Mr. MEEKS. Thank you, Mr. Chairman.

For the purpose of asking a question, I yield 30 seconds to Mr. Adler.

Mr. ADLER. I thank the gentleman.

With respect to TALF 2, do you anticipate including commercial auto fleet leasing in the TALF 2? I am sure you are aware that there may be 900,000 cars and light trucks that are included in this sort of fleet leasing arrangement. I think it is a critical part of our economy.

Mr. BERNANKE. I don't know the answer to that. We can certainly look at that.

Mr. ADLER. I appreciate it very much.

I yield back my time.

Mr. MEEKS. Thank you.

Mr. Chairman, let me just ask you a quick question on international monetary policy for a second. Who do you think should be responsible for providing supervisors of systemic risk for the international economy?

Mr. BERNANKE. Well, we have international institutions like the IMF, for example, which has expertise in financial matters, which does, for example, what is called an FSAP, a financial stability assessment program. It goes to different countries and tries to assess

the strength of their financial systems, regulatory systems and the like. The United States is currently about ready to undergo one of those FSAP programs.

In addition, we have a number of international organizations like the Financial Stability Forum and the Basel Committee where supervisors and regulators from around the world come together and discuss international issues, international regulatory issues and so on. But even though there is a great deal of international cooperation and coordination, certainly we don't have any kind of central authority that has the ability to require a country to make specific changes. It is more of a cooperative attempt to come together on certain principles.

Mr. MEEKS. I note that in the fall the G20 meeting delegated most of our guests to the Financial Stability Forum. And I think the IMF should play a role with the various institutions, looking at maybe a division of labor, with each institution having some responsibility, something that comes through, even if it is informal. Because the key is to have some kind of an international regulation. Otherwise, even what we do here, our markets could be affected unless there is some kind of cooperation.

Mr. BERNANKE. That is a very good point. And everything we do, as Congress goes forward and looks at our regulatory reform in the United States, we have to be sure that it is consistent and coherent and matches up with international regulations if only because our firms are international, our markets are international.

The Financial Stability Forum, the IMF, and other international bodies had been very useful in doing evaluations of the crisis, diagnosis of the crisis, and at a minimum, we should look at their recommendations as we make our own decisions.

Mr. MEEKS. I think you have mentioned in prior speeches that the United States could benefit from expanding the Fed's oversight authority to include nonbank financial entities. And my question then, what are the pros and cons of creating a microprudential supervisor for the United States?

Mr. BERNANKE. First, I think it should be a very high priority for the Congress as we go forward to make sure that a financial crisis like this never happens again, and there are a number of things that can be done in that direction. That includes, for example, improving our regulatory oversight of the largest, most systemically relevant institutions. It includes strengthening our financial infrastructure, the ways—the methods by which CDS and other derivatives are traded. It involves improving our regulation to reduce procyclicality inherent in our capital regulation, perhaps in our accounting rules, as some members have already discussed.

So there are a number of things we can do to try to reduce the exposure of the system to a crisis in the future absent what you are talking about, a macroprudential regulator. And I think we should do all those things.

That being said, I think there is some benefit to moving in a direction whereby somebody or a group of bodies would have an ability to look at the system as a whole instead of only looking at each individual institution in isolation to try to establish or determine emerging threats or risks that might be a problem for the system as a whole. So I think there is a reason to be looking at that.

The Federal Reserve has a long-standing role in financial crisis management. And I think we would very likely want to be involved in some way in that process, but specifically how that would be structured or who would be doing it, those are issues I think the Congress needs to address.

Mr. MEEKS. Would there be any countries, for example, that we could look to or you would look to as models for the reform?

Mr. BERNANKE. Well, a number of countries have taken steps in that direction. Just to give one simple example, the Spanish banking supervisors instituted a bank capital system which allows for more accumulation of capital during good times to have it be available to run down during bad times. And that seems to have helped their banking system throughout this crisis.

So there are a number of different steps that have been modelled by different countries that we could look at. There is not to my knowledge any country that has a full-fledged macroprudential supervisor. But there has been a great deal of discussion about what that would involve and what are the components of such a system.

Thank you.

The CHAIRMAN. We are going to go until the next vote. The Chairman had agreed to actually stay until 2:00. There is probably another vote about 10 after or 15 after, and it would not make sense to stay after that. We will go until the first vote. Everybody here should be able to get a question in, at least 5 minutes.

The gentleman from Texas, Mr. Hinojosa.

Mr. HINOJOSA. Thank you, Mr. Chairman.

Chairman Bernanke, thank you for coming to visit with us and inform us. I think I can understand your likely frustration when you hear that people want to nationalize the banking system. I have heard from a lot of small community bankers calling in this morning and wanting some clarification. So I say that, in most cases, they don't redefine nationalization, which can be tricky and maybe we can discuss that.

But let me go back to history and say that, in 1933, in the wake of the 1929 stock market crash, and during the nationwide commercial bank failure in the Great Depression, the President signed into law the Glass-Steagall Act. That Act separated investment entities and commercial banking activities. At the time, improper banking activity or what was considered overzealous commercial bank involvement in stock market investment was deemed the main culprit of the financial crisis of that time. According to that reasoning, it seems to me, commercial banks took on too much risk with depositors' money. Additional and sometimes nonrelated explanations for the Great Depression evolved over the years, and many questioned whether that Glass-Steagall Act hindered the establishment of financial services firms that can equally compete against each other.

When Congress passed Gramm-Leach-Bliley, it negated the Glass-Steagall Act by allowing banking and securities and insurance companies to operate in affiliation with each other under the organizational form of financial holding companies. That Act permitted financial holding companies, like financial subsidiaries of banks, to engage in a variety of activities not previously allowed to banks or companies owning banks. Under the Act, you and the

Treasury Department, which contains the Office of the Comptroller of the Currency, have authority to issue regulations expanding activities for financial holding companies and the financial services entities respectively.

So that leads me then to my question to you, Chairman Bernanke. In light of the current financial crisis which we are in, in which numerous banks have received considerable capital infusion from the government, would you agree that we need to revisit Gramm-Leach-Bliley to determine if we should reinstate the Glass-Steagall separation of banking and commerce?

Mr. BERNANKE. Congressman, I would first observe tangentially that there were separate standing investment banks in this crisis which didn't do very well. It was in some ways fortuitous that they were able to become bank holding companies, become part of banking and more consolidated systems.

I think that we need to look very hard at our system, and I think everything should be on the table. We should talk about all these issues. My own sense, though, is that the holding company structure can be made to work, but we do need to take more seriously than we have the idea of a consolidated holding company supervisor. Although that position was there in practice, in principle and the Federal Reserve had that responsibility for bank holding companies, we need a stronger oversight from the top that looks at the overall firm, looks at the risks being taken by the overall firm and not just a firm-by-firm type of analysis.

So I guess my bottom line is, yes, let's look at everything.

Second, I think that holding company form can be made to work. But, third, if we do that, we need to make sure that we have strong holding company supervisors who are looking at the entire firm and are aware of the risks to the entire firm.

Mr. HINOJOSA. In the calls that I received this morning from commercial bankers, or whether or not commercial but what we call community banks, those that have less than $25 billion in assets are saying that some of them took money that was available here in that first batch of money that we lent out but that the vast majority of it went to the 25 megasized banks. So they simply feel that people like you and our chairman need to speak up for community banks so that they are not thrown into the same big mess that the big megabanks have gotten into.

Thank you.

Mr. BERNANKE. I understand.

The CHAIRMAN. The gentleman from Michigan, Mr. McCotter.

Mr. MCCOTTER. Thank you, Mr. Chairman.

I would like to pick up where my colleague from Michigan, Mr. Peters, had raised the issue of the TALF and how it would or would not help the American auto industry.

I guess that there is some concern because the AAA credit rating standard that you are trying to apply to people who qualify under the TALF, that the automakers might not. I was wondering if you could assuage me of many concerns that I may have that auto financing may not be covered by that.

Mr. BERNANKE. The first portion of the TALF, which is going into operation very soon, includes certain auto loan, asset-backed securities, and also floor plan loans for dealers. I am not sure about

this auto leasing question that was asked. We do require AAA securities, but remember that a AAA security can be a senior traunch of a security which has different layers of seniority. So it should still provide substantial support to auto loans and therefore to help the customers of the auto companies to be able to purchase vehicles.

So it is our belief that through this program we will be helping the automobile industries by providing credit to customers. But we will, obviously, look at that again, if necessary.

I would mention also in our commercial paper program that we have an A1/P1 top credit rating requirement. But our intervention in that market, at least, has occurred at the same time as a significant improvement in commercial paper rates for even A2/P2 borrowers. So that there, too, I think some help is being given.

Mr. MCCOTTER. Yes, I appreciate that. Because the concern is with the financing. The dealers get to purchase the cars from the manufacturers. And so I just want to be clear with the TALF going forward, because I don't want to sandbag you with an article you might not have been able to read yet.

But The Wall Street Journal article today has caused grave concern back home in Michigan and amongst the auto industry that the TALF would not help dealers to refinance, to be able to purchase, get credit to go purchase the cars from the manufacturers, which, as you know, at the time that the Federal Government outside of the Reserve is trying to deal with the bridge loans to the auto industry would be a death knell to them. So I just want to make sure that in the process that I am hearing is that we with the Fed would be doing everything we can to assist the extension of credit to both consumers and the dealers.

Mr. BERNANKE. Let me assure you that what we have been doing, as I mentioned before, is consulting closely with the participants in these markets. And where we have found that there are barriers to participation that we could do something about, we have done so. We will look at this again as well.

Mr. MCCOTTER. I appreciate that.

And, finally, so the AAA credit rating that has been reported as being required, which is a requirement that you would impose as the Federal Reserve, is one of those obstacles that could be removed.

Mr. BERNANKE. Well, given the concerns of some of your colleagues about credit risk, I am not sure about that. But I would like to point out that, again, you don't have to have all AAA underlying assets to get a AAA credit rating if you take, say, a more senior traunch of the asset-backed securities. So it does not rule out making loans even to weaker credit histories.

Mr. MCCOTTER. I appreciate that. I just want to make sure that we are aware of the obstacle that we are concerned about.

And as for credit risks, I understand that, too. And the worst thing we could do for any type of credit is to increase the foreclosure crisis by putting a whole lot of men and women who are working in the auto industry out of their jobs and out of their homes. So it seemed to me that I have registered with you my concern that you do everything you can to remove any obstacles to the auto industry's survival through the TALF program.

The CHAIRMAN. The gentleman from Massachusetts, Mr. Lynch.

Mr. LYNCH. Thank you, Mr. Chairman, and thank you, Chairman Bernanke.

We learned in the February report from the top oversight panel that the banks that had received TARP money in exchange for their assets had actually overstated the value of those assets that they held and it sold in return for TARP money by about a third. The total was about $78 billion that the American taxpayer overpaid for what the banks said they had.

And this goes to a number of issues. It goes to the mark to market or mark to make believe argument, if we are going to allow these banks to value their own assets according to their own model; and it also goes to the reassurances that we are hearing from you to a certain degree and also from Sheila Bair that these banks are adequately capitalized.

Obviously, if the assets they hold are not worth what they say, it is going to affect their capitalization rate. And if the assets were proven to be, like in this previous report from the Oversight Committee, valued at far less than what they stated, then those banks, if it is as big a spread as 33 percent as we are seeing here, that would affect whether or not these banks are indeed adequately capitalized.

I am just wondering, in your assessment, are you accepting the banks' own opinions of the values of these assets? Or are we digging through, like Mr. Barofsky and Mr. Dodaro and Ms. Warren are on the oversight panel, going through there and digging and looking at these exotic derivatives, CDOs, whatever they are holding there as assets, in order to get a firm sense of what the values are? Are we doing that?

Mr. BERNANKE. Of course we are doing that.

But, first, let me address that question about the $78 billion. That was not a purchase of assets. There were no overvalued assets being sold.

What happened, of course, was that the government made preferred stock investments in the banks. And we know what we have. There are investments in the banks that pay a reasonable dividend.

Now that calculation was based on the following analysis: if the government had matched the same terms as the best deal that anybody had gotten in recent weeks or months, then how much better a deal could the government have gotten? And they concluded that if the government had negotiated like Warren Buffett, maybe they could have gotten a better deal. In that sense, the government didn't get all it could.

But as that report also acknowledged, the government's program wasn't just about making the best possible financial deal. It was also about having a broad-based program that would be accessible to a lot of banks that would bring financial stability that would be easy to get out of when the time came. So the idea that there is some kind of fraud here is—I think is entirely wrong.

Mr. LYNCH. Well, you need to take that up with the Oversight Committee, sir. Because I spoke to them all yesterday—I sit on another committee, the Oversight Committee, and the direct and straight assessment that they made in that report and confirmed

yesterday was that the taxpayer had indeed overpaid and that the assessed value by these banks of those assets was overstated. And that is the way—and I tested them on this, and they did nothing to dissuade me from believing that.

Mr. BERNANKE. Their own report says that there were other issues to be considered which they did not take into account in making that evaluation. But let's just leave that.

Mr. LYNCH. Let's leave that aside.

Mr. BERNANKE. On the other issue, obviously, we have to rely to some extent on bank systems and information in evaluating their asset values. There is no way around that. But we certainly test very hard their methodologies. We do sample testing of different assets. So we are doing all we can to make sure their evaluations are accurate. And, of course, besides the supervisors, they have auditors and others who are looking at their analysis.

And one of the purposes of this supervisory review that we are undertaking right now is not only to make sure that we have a tough evaluation of asset positions both under the main-line scenario and under the stress scenario but to make a special effort to make sure that the different regulatory agencies are valuing in a consistent way so there won't be any distinction between those who are more aggressive and those who are less aggressive in marking down their assets.

Mr. LYNCH. In closing, I just want to say, Mr. Chairman, I appreciate you coming here. But from the sound of President Obama's remarks last night, it sounds like the financial services industry is coming back for more money. And the risk appetite here, based on what we have seen in this last round, is not very high. So, you know, credibility means a lot here.

Thank you, Mr. Chairman. I yield back.

The CHAIRMAN. The gentleman from Illinois, Mr. Manzullo.

Mr. MANZULLO. Thank you, Mr. Chairman.

Chairman Bernanke, I appreciate your perseverance and also your candor, and I want to thank you for the service that you are lending to our country at this very difficult time.

I have a dry erase board in my office where I have identified seven choke points on the flow of credit, getting it through to the hands of the consumers. And some of those are involved with even overnight money from large banks to community banks where they out charging larger fees and requiring collateral that was never required before. FHA and VA now require their members' FICO scores, which were never required before. It was otherwise based upon good lending standards.

The people who put out the FICO scores, the three companies, if there is an error, it can take 60 to 90 days to correct the error, if at all. And it is one problem after the other.

And now we have community banks who are experts at lending in the community, have taken a look at whether or not they should take TARP money. But the requirements are so onerous and so restrictive that they have ready, willing, eligible people willing to lend to that they are not going to take the TARP money.

I have met this past week with a retailer. Assets are four to one. And the regular bank says that is it. We no longer do asset-based

lending. I have a manufacturing company with orders that wants to expand, and the money can't get through.

So we have all these choke points where it is being forced from the back to the large banks and now to some community banks. But it is not breaking loose, Chairman. And I know that is what you want to do, and I don't know where to start on this. But we are asking your advice because now we are way down to the consumer end on it. Have you taken a look at the FICO score errors and, for example, how that's keeping people from otherwise qualifying?

Mr. BERNANKE. On the errors, no, that is not really our domain.

Mr. MANZULLO. I know. But it is a plug to the work that you are doing.

Mr. BERNANKE. As I have talked about today, we are working at all levels to try to free up the credit stream from cutting interest rates to working on the ABS markets to lending to banks to our examination process to try to make sure that there is an appropriate balance between caution and lending to creditworthy borrowers. Some of this, frankly, is the rebound from a period where credit standards were too loose, and we have seen some tightening, but, obviously, we need to make sure credit is available or the economy is not going to recover.

Mr. MANZULLO. The other question is, community banks back home are really complaining over a tightening of lending standards by the regulators to long, long-time customers, people that have never been in default. And what we see is a whole new group of people are really being injured—the people who never had the problems in the first place. Have you ever thought about meeting with the regulators, including yourself, to see if there is a reason why there is—maybe there is too much and unreasonable regulations going on at that end?

Mr. BERNANKE. There has always been a problem in downturns that examiners want to be cautious. They don't want to allow risky loans because they are afraid, you know, that the bank would lose money. But at the same time that cuts off credit that could otherwise be flowing.

Mr. MANZULLO. They are being overcautious.

Mr. BERNANKE. Overcautious.

Mr. MANZULLO. The money is not coming through.

Mr. BERNANKE. We have taken explicit action on this front. In November, there was a joint statement by the four Federal regulators about lending to creditworthy borrowers and emphasizing that the safety and soundness of the banking system depends on long-term profitability as well as on short-term caution. And long-term profitability includes maintaining good credit relationships with creditworthy borrowers and supporting the broad economy so that it will be healthy and produce a good economic environment for the banks.

We have talked to all of our supervisory staff. We are communicating with our examiners. I urged feedback if this is happening, because we are determined that the examiners should do a fair balance between appropriate caution, safety and soundness, which is essential, of course, but not to deny unreasonably credit to good, creditworthy borrowers, particularly long-standing customers.

The CHAIRMAN. The gentleman from Massachusetts. We will be able to fit everybody in because we have a vote. The gentleman from Massachusetts.

Mr. CAPUANO. Thank you, Mr. Chairman.

Chairman Bernanke, first of all, thank you for doing this all day. I apologize for coming in and out. I haven't heard all the questions, so some of my questions may be redundant.

I would love to go back to actually the beginning of the hearing when you talked about what caused—what was the trigger, I think was the term you used. And I agree with you. Borrowers who borrowed more than they should, lenders who gave it.

But I also want to add one more thing that I actually think, in the final analysis, the people who were put there to prevent that very thing from happening, namely, the regulators across the board, fell down. If the regulators had done their job, in my opinion, they would have been able to choke off most of the funding that was made available through these incredibly leveraged and highly complex financing mechanisms. They could have done something about the credit rating agencies basically lying. They could have done something about the accounting mechanisms that were made up. They could have done something to stop banks from creating these subsidiary corporations that didn't exist on their books somehow.

So I agree with you that the borrowers and the lenders were both responsible, but so were the regulators. They weren't anyplace to be seen.

A few weeks ago, you were here on some other issues. We talked about your marriage to the Treasury Department. And I will tell you that, right now, the marriage doesn't seem to be going so well from my end of the world for the very simple reason that, 3 weeks later, I still don't have a clue what they are talking about for their bad asset bank, whatever they are going to call it.

I guess the new term now is—what—legacy assets? It is a good term. Whoever made it up, give them a raise. Because it sounds much better than toxic assets.

But from what I understand, it is the same thing; and I would encourage you to go back and tell your partners, please, at some point maybe we should know what they are doing. Maybe America should know what they are doing. That might help, at least what they plan.

The next issue, I want to talk about—and, again, I think you did talk about it with the others; and I apologize if it is redundant. But nonetheless, it is important to me.

As I understand it, with this capital asset program there is some discussion now about swapping out what is currently our preferred position. That basically only puts us at risk if the bank completely goes sour, guaranteed income, etc., etc. First in line, swapping that out for a position with common voting stock?

Now I am not sure I have any—there are no details that I am aware of, but these are all based on news reports and on your joint statement. But if that is true—and then on top of that, increasing our position to 40 percent position? If I understand that correct, that would put us in a weaker position, open taxpayers to a much riskier position without having the ability to then change manage-

ment or to do anything. A minority position of 40 percent gives us nothing.

And it strikes me that—if you want to put more capital into the bank, go ahead and do it. You already have the facilities to do it. You have done a great job creating new ones. But to swap us out for a common position I think runs counter to everything we have discussed here. And I am just wondering, am I missing something? And, if so, please clarify it.

Mr. BERNANKE. Well, first, the details of the instrument are still being worked on and should be available shortly. And that will describe what protections the taxpayer will be getting in this particular instrument. A lot depends on the details, obviously.

In terms of the controls, though, as I have noted, even if there is 40 percent or less government ownership, we still have numerous tools to make sure that the banks are moving in the right direction in terms of taking necessary steps to return to viability and return to ability where they can lend.

So, for example, you mentioned management. We already have considerable power as supervisors to insist that management or the board be changed if it is not performing well.

Mr. CAPUANO. If we have to take a 40 percent position on a huge bank, please tell me what the definition of failed management is.

Mr. BERNANKE. If we had 40 percent position of a bank, we would obviously have a great deal of influence on management, on board, on policies, on structure, on capital structure, all those elements. So it will not be a case of "give them the money and go away." It would be a case of—

Mr. CAPUANO. At some point, if it is 40 percent—when does it make sense to either go to 51 percent—and I know the word nationalization nobody wants to talk about. And I actually think it is a misnomer, if you want the truth. It is not a word I am interested in using, because it doesn't mean anything to me. But at 49 percent, for the sake of discussion, isn't it just easier to have the FDIC come in and do what they do and have you do what you do in the normal course of events?

At some point, it no longer becomes an investment. It becomes—you know, they are on life support. And that is, to me, strikes me as us, you, whoever for some reason just stopping short of what is necessary.

Mr. BERNANKE. Well, I don't think we want to let large institutions fail in this sort of way.

Mr. CAPUANO. I agree.

Mr. BERNANKE. So we want to do it in a way, if we think that the firm can be strengthened and made viable and can become part of the recovery, part of the solution, I think that is what we ought to do.

The difference between 49 percent and 51 percent is not that great, in my opinion. I think, in any case, with a minority ownership share, with the supervisory authority and the like, we can take strong steps to make the banks improve their situation.

Mr. CAPUANO. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you. And as you work out the specifics of the marriage with Treasury, remember that my colleague, like me,

is from Massachusetts. We give you more leeway in doing marriages than some other places.

The gentleman from North Carolina.

Mr. MILLER OF NORTH CAROLINA. Thank you, Mr. Chairman.

You mentioned earlier, I think in your response to Mr. Lynch's questions, or spoke of a stake we got in Goldman and the appearance that Berkshire Hathaway, Warren Buffett did much better in his negotiations than we did. On its face, getting a 40 percent stake in a common share of stake in a company for $45 billion when a company has a current market capitalization of $10 to $12 billion doesn't sound like a very good deal either. If there is an explanation for that, could I get that in writing, why it is really a much better deal than it appears on its face?

Mr. Chairman, I am not reflexively antigovernment or promarket. I am a Democrat. I think there are some things that government does well that markets do poorly or don't do at all. Valuing securities is not one of those. That really is the core competency of markets, and it is something that government generally doesn't do at all.

But one of the stated reasons, probably the principal stated reason, for the Paulson plan last September and October for buying troubled assets was establishing a market for them. Is that going to be part of the rationale for the public-private partnership, to take troubled assets off books?

Mr. BERNANKE. Yes. Precisely. That is a difficult challenge, and we want to make sure that the prices of the assets that are purchased reflect true market values and are not overpaid. So the idea behind the public-private partnership would be that there would be both public and private money involved and the pricing decisions would be made by private sector specialists, not by public bureaucrats.

Mr. MILLER OF NORTH CAROLINA. What do we bring to that partnership other than just a contribution of capital? Are we going to be guaranteeing assets?

Mr. BERNANKE. No. One of the key contributions is that we are providing financing. So one of the problems today is that there may be many investors out there who say there are great bargains in terms of assets that I could buy, but nobody will give me money to buy these assets and hold them for a period of time until they recover. So if the government is willing to provide longer-term lending or leverage, then there are many investors who presumably would be willing to buy under those circumstances who are unwilling to buy without the credit, without the lending they need to finance those purchases.

Mr. MILLER OF NORTH CAROLINA. I look forward to hearing the details.

There was a quick discussion of mark to market. The current mark to market rules if there is not—if there is an active market, we use that price to value assets. If there is not, there is a fair amount of leeway that we can use or a financial institution can use, computer models, can assume a hold until maturity. Isn't that essentially the same analysis that the stress test will do, projecting in different economic scenarios what happens to the bank? Isn't that the same—

Mr. BERNANKE. Well, the stress test will use the same GAAP accounting that all other evaluations use. That is, mark to market accounting for those mark to market assets, accrual accounting for accrual assets. What is unusual and different about the stress test is that it is a coordinated analysis across 19 major institutions at the same time which will look not only at the projected losses, the projected outcomes under the main line or baseline scenario but also at the outcomes under a so-called stress scenario or a situation where the macroenvironment is worse than anticipated to make sure that there is sufficient buffer for the banks to be able to lend even in that worse scenario.

Mr. MILLER OF NORTH CAROLINA. But that projection of different—what happens in different economic circumstances, isn't that exactly the same as a model with values assets?

Mr. BERNANKE. Well, it is part of it. It could be part of it. That is right. There are a lot of things that go into a model of valuing assets, including many details about the nature of the assets and where—

Mr. MILLER OF NORTH CAROLINA. The Fed is one of our leading safety and soundness regulators in addition—well, have that jurisdiction for all members of the Federal Reserve Board, which is pretty much every bank in America. In addition, you have taken $2 trillion in assets as security, as collateral. Are we not doing that already? Are we not doing that already as part of safety and soundness or as part of our looking at the value of the assets as collateral?

Mr. BERNANKE. Yes, of course we are valuing assets. What is new about the assessment process that we are undertaking here is primarily that we are doing it consistently across all of these institutions. So that investors will get a sense both of what these firms look like in the stress scenario but also a sense of comparing among firms and under a comparable scenario.

Mr. MILLER OF NORTH CAROLINA. If banks are insolvent, can you offer any argument, rationale based on economics or blunt ethics why shareholders or, rather, taxpayers should bear that loss instead of shareholders and creditors?

Mr. BERNANKE. It is a complicated question. But one problem is we don't have a bankruptcy system that will allow us to wind down a big global institution in a safe way that won't be incredibly disruptive to the financial markets and to the economy. So what we need to do is find a way to do it that can involve all the necessary restructuring, all the necessary steps but without the financial implications of a disorderly bankruptcy of a global financial institution.

The CHAIRMAN. The gentleman from Indiana.

Mr. CARSON. Thank you, Mr. Chairman.

Mr. Chairman, my colleagues and I hear from constituents every time we go home about the barriers our constituents face who are on the verge of foreclosure. They try to work out programs with servicers to modify their loans.

In January, the Fed announced a program to modify mortgages obtained from JPMorgan, AIG, and Bear Stearns that are now held by the Federal Reserve. Under the details released, Mr. Chairman, the plan states that if the Federal Reserve holds the subordinate

but not the senior mortgage, the Fed will work with the servicer of the senior mortgage to modify the loan.

The question for me becomes two things, sir: How does the Fed anticipate working with servicers that have so far been unresponsive to constituents and even congressional offices who try to reach out on their behalf? And, secondly, what tools do you plan to use, sir, to bring about meaningful mortgage modifications on these subordinate mortgages for homeowners?

Mr. BERNANKE. Well, we have already been working, and we have already had some loans modified. We have been doing outreach for the borrowers, which is one of the big issues, and we have been contacting servicers—and when I say "we," in many cases, it is our agent on our behalf because we don't directly manage the mortgages—to try to find solutions for delinquent borrowers. So we are addressing some of the same issues that every owner of mortgages is facing.

I should say that if the Administration's plan is followed through, then there would be a uniform approach for all government-owned and other classes of mortgages that fall under that plan. So at the Federal Reserve we would conform to the Administration's set of rules and criteria.

Among the elements of that plan are bonuses, money paid to the servicers to try to make sure they have enough manpower, resources to reach out to borrowers, to reach out to other lienholders and to undertake the work necessary to complete restructurings to avoid preventible foreclosures. So we would be going into the same program that the Administration has laid forth for the purpose of consistency. But we have instructed our agents to take those steps whenever possible, and we have had some early success in getting mortgages modified.

Mr. CARSON. I yield back the balance of my time, Mr. Chairman.

The CHAIRMAN. The gentleman from Minnesota.

Mr. PAULSEN. Thank you, Mr. Chairman.

Chairman Bernanke, I was just curious. I will ask this question. Recognizing that we and the market have been having difficulty valuing assets of major banks on the balance sheets, you know, my constituents and I certainly have heard a lot about the whole issue of mark to market accounting recently, about the suspension potentially of that accounting mechanism as a possible method of addressing the banking crisis. Could you discuss from your perspective some of the pros and the cons of why mark to market might be a good idea to suspend or regarding implementation of the policy for what period and just some thoughts on that?

Mr. BERNANKE. Certainly. As I discussed earlier, the basic idea of mark to market accounting is very attractive, the idea that wherever there are market values determined in free exchange that those market values should be used in valuing assets so that investors would have a more accurate sense of what the institution is worth. So that is the principle, and it is a good principle in general.

Going back to the beginning of this change in the accounting rules, however, the Federal Reserve had reservations about the fact that some assets, such as individual C&I loans, for example, don't trade frequently in markets and therefore are much more difficult

to value on a mark to market basis. This problem has become much more severe recently because many assets that were at one point traded in markets now no longer are because those markets have dried up, are illiquid or are not functioning in any serious way. So we have heard a lot of concern whether some assets are being misvalued too high or too low based on the use of mark to market modelling or mark to market asset valuations?

There is no simple answer to that question. I don't think there is any real appetite among the accounting authorities, for example, for suspending mark to market accounting, because there is still a great deal of valuable information in the market values that is useful to investors.

At the same time, the accounting authorities had recognized that the mark to market principles don't work very well for some assets in situations of illiquid assets, illiquid markets; and they have promised to issue guidance. They have issued some guidance about how to address those situations. So I think it is important for them to continue to think about appropriately advising banks about how to value assets that are not frequently traded and how those valuations ought to appear on the income and balance sheet statements of the banks.

So there are some real challenges there, and I think the accounting authorities have a great deal of work to do to try to figure out how to deal with some of these assets which are not traded in liquid markets. But I don't see a suspension of the whole system as being constructive, because there is a great deal of information in valuing many of these assets according to market principles.

Mr. PAULSEN. Well, Mr. Chairman, that helps me from the perspective of someone who is a mathematics major and understands it is necessary for accounting purposes that it is a difficult situation if you did go back on it. And I think this is going to be a conundrum for the committee and for us as we continue to deal with new circumstances and the new situation. We are in an uncharted territory. I hope this is something this committee is going to be able to look at with thoughtfulness in terms of doing it in the right manner, in the right way so we will be more prospective looking down the road.

Thank you very much.

The CHAIRMAN. I thank the gentleman.

Finally, Mr. Green. If any members are listening or staff is here, don't bother coming. Mr. Green.

Mr. GREEN. Thank you, Mr. Chairman, and thank you, Chairman Bernanke.

I have been in and out today. I have the honor of also serving on Homeland Security, and Chairwoman Napolitano has appeared before Homeland today. So it has been an exciting day, to say the very least.

I have a couple of questions. The first has to do with the stock market. For whatever reasons, the stock market seems to be the asset test for the strength of the American economy. I would like you, if you can, to tersely comment on this and tell me to what extent should we rely on the stock market, which is an international market? To what extent do you think we should rely on it as an asset test for the strength of the economy?

Mr. BERNANKE. Well, the stock market is one important financial indicator. It is not the only indicator. There are credit markets, for example, which are telling somewhat different stories in the stock market in some cases. I mean, some of them have shown some improvement in the last few months.

With respect to the stock market, it is important because it does reflect the profit expectations of a large number of firms, and, therefore, it is closely tied to expectations about the economy. That being said, as you point out, a large share of the profits that are being reflected in stock prices are not U.S.-based. They are foreign-based. So that obscures the connection just a bit.

And, secondly, the risk appetite of investors changes over time. And, right now, standard measures of the risk premium that investors are charging to hold stocks are at very high levels relative to anything we have seen in recent decades, suggesting that part of the reason the stock prices have fallen so much and are so low is that investors are just very skittish about holding any risky assets and have moved in a very substantial way towards the safest assets, like Treasury securities.

So I think, at least in part, the stock values reflect not so much the fundamentals in the sense of the long-term profitability of the economy, but they also reflect investor attitudes about risk and uncertainty which right now are at very high levels.

Mr. GREEN. Thank you.

The next question has to do with credit default swaps. I know that we have made substantial investments in AIG, but the credit default swaps have not been dealt with in their entirety. Can you give me some indication as to where you think we are headed with the credit default swaps?

Mr. BERNANKE. Certainly. From our perspective and from the perspective of the financial system, one of the main concerns about credit default swaps was a counterparty risk, that you would sign one of these agreements with another party, think you had protection against some form of credit risk and then the counterparty would fail or be unable to make good on their promises. So that is a way in which failure in one company can be transmitted to failure in other companies and then you could have contagion in the financial system.

So the Federal Reserve has been working for some time to strengthen the clearing and settlement trading systems under which CDS are traded. Going back to even before the crisis, the New York Fed was very much involved in trying to improve the efficiency of the trading process.

Now going forward, though, I think it is very important that we, where possible, move CDS and some other over-the-counter derivatives—not in all cases but where possible and where appropriate—to central counterparties, that is, to organizations that stand between the two sides of the bargain and control the credit risk so that if one side defaults, the collective of participants in the central counterparty make that good so we don't have the transmission of credit losses from one counterparty to the other.

The Federal Reserve and the other regulators in the United States as well as European regulators have been very active on this front, and we have a number of firms in the United States which

have proposed to open central counterparties for CDS as well as those in Europe, and we expect to have those in place very soon.

Mr. GREEN. One final question, Mr. Chairman. This has to do with the mark to market.

If we bifurcate the instruments into performing and nonperforming and mark to market those that are in default as well as those that are about to be sold, those that are not in default, not about to be sold, separate them and mark them to market only if they go to default or are about to be sold, does that help to resolve the question?

Mr. BERNANKE. It wouldn't in an accounting perspective. Because even if you have a large number of Alt-A mortgages, for example, your experience shows that a certain number of those will default after a certain period of time. And even if you have some which are relatively new and haven't defaulted yet, you know there is going to be some loss experience there. There is going to be some percentage that are going to go bad. And the usual practice would be to make some allowance in advance, even though if none of them have actually defaulted yet, you know some of them will. You take some provisions against that. So you don't want to assume zero loss just because you haven't had a default up till date.

Mr. GREEN. Thank you, Mr. Chairman.

The CHAIRMAN. The time has expired.

The Chairman has been gracious with his time and his interruptions, and the hearing is adjourned.

Mr. BERNANKE. Thank you.

[Whereupon, at 1:35 p.m., the hearing was adjourned.]

# A P P E N D I X

February 25, 2009

U.S. House of Representatives
The Honorable Ron Paul
Statement for the Record
Financial Services Committee
Humphrey-Hawkins Hearing
February 25, 2009

Mr. Chairman,

We find ourselves mired in the deepest economic crisis to afflict this country since the Great Depression. Yet, despite the failure of all the interventionist efforts to date to do anything to improve the economy, each week seems to bring new proposals for yet more bailouts, more funding facilities, and more of the same discredited Keynesian ideas. There are still relatively few policymakers who understand the roots of the current crisis in the Federal Reserve's monetary policy. No one in government is willing to take the blame, instead we transfer it onto others. We blame the crisis on greedy bankers and mortgage lenders, on the Chinese for being too thrifty and providing us with capital, or on consumers who aren't spending as much as the government thinks they should.

One aspect that needs to come to the fore once again is that of moral hazard. When the government acts as a backstop to insure losses that come about from making poor decisions, such poor decision making is rewarded, and thereby further encouraged in the future. Such backstopping took place through the implicit government guarantee of Fannie Mae and Freddie Mac, it takes place through FDIC deposit insurance that encourages deposits in the fundamentally unsound fractional-reserve banking system, and it has reached its zenith in the TARP program and its related bailouts.

When banking giants are reimbursed for their losses through redistribution of taxpayer money, what lesson do we expect them to learn? Can anyone in Washington say with a straight face that these banks will shape up their business practices when they are almost guaranteed billions of dollars in taxpayer funds? Even if this does provide a temporary lifeline, it only delays the inevitable collapse of a banking system built on an unsustainable model. Fractional-reserve banking is completely dependent on faith in the banks' abilities to repay depositors, and when that ability is thrown into doubt, the house of cards comes crashing down. The Federal Reserve may be able to manage public confidence, but confidence only goes so far. When banks are required to hold a maximum of ten percent of their deposits on reserve, the system is fundamentally insolvent. Such a system cannot be propped up or bailed out, except at the cost of massive creation of money and credit, which would result in a hyperinflation that would completely destroy our economy.

Chairman Bernanke and others in positions of authority seem to gloss over these systemic instabilities and assume an excessively rosy outlook on the economy. I believe we are at another major economic crossroad, where the global financial system will have to be fundamentally rethought. The post-Bretton Woods dollar standard system has proven remarkably resilient, lasting longer than the gold-exchange system which preceded it, but the current economic crisis has illustrated the unsustainability of the current dollar-based system. To think that the economy

will begin to recover by the end of this year is absurd. The dollar's supposed strength exists only because of the weakness of other currencies. The Fed's increase of the monetary base and establishment of "temporary" funding facilities has set the stage for hyperinflation, and it remains to be seen what results.

If banks begin to lend their increased reserves, we will see the first steps towards hyperinflation. Now that the Fed has increased the monetary base, it finds itself under pressure to withdraw these funds at some point. The question, however, is when? If it withdraws too soon, banks' balance sheets collapse, if too late, massive inflation will ensue. As in previous crises, the Fed's inflationary actions leave it compelled to take action that will severely harm the economy through either deflation or hyperinflation. Had the Fed not begun interfering 18 months ago, we might have already seen a recovery in the economy by now. Bad debts would have been liquidated, inefficient firms sold off and their resources put to better use elsewhere. As it is, I believe any temporary uptick in economic indicators nowadays will likely be misinterpreted as economic recovery rather than the result of Federal Reserve credit creation. Until we learn the lesson that government intervention cannot heal the economy, and can only do harm, we will never stabilize the economy or get on the road to true recovery.

For release on delivery
10:00 a.m. EST
February 25, 2009

Statement of

Ben S. Bernanke

Chairman

Board of Governors of the Federal Reserve System

before the

Committee on Financial Services

U.S. House of Representatives

February 25, 2009

Chairman Frank, Representative Bachus, and members of the Committee, I appreciate the opportunity to discuss monetary policy and the economic situation and to present the Federal Reserve's Monetary Policy Report to the Congress.

**Recent Economic and Financial Developments and the Policy Responses**

As you are aware, the U.S. economy is undergoing a severe contraction. Employment has fallen steeply since last autumn, and the unemployment rate has moved up to 7.6 percent. The deteriorating job market, considerable losses of equity and housing wealth, and tight lending conditions have weighed down consumer sentiment and spending. In addition, businesses have cut back capital outlays in response to the softening outlook for sales as well as the difficulty of obtaining credit. In contrast to the first half of last year, when robust foreign demand for U.S. goods and services provided some offset to weakness in domestic spending, exports slumped in the second half as our major trading partners fell into recession and some measures of global growth turned negative for the first time in more than 25 years. In all, U.S. real gross domestic product (GDP) declined slightly in the third quarter of 2008, and that decline steepened considerably in the fourth quarter. The sharp contraction in economic activity appears to have continued into the first quarter of 2009.

The substantial declines in the prices of energy and other commodities last year and the growing margin of economic slack have contributed to a substantial lessening of inflation pressures. Indeed, overall consumer price inflation measured on a 12-month basis was close to zero last month. Core inflation, which excludes the direct effects of food and energy prices, also has declined significantly.

The principal cause of the economic slowdown was the collapse of the global credit boom and the ensuing financial crisis, which has affected asset values, credit conditions, and

consumer and business confidence around the world. The immediate trigger of the crisis was the end of housing booms in the United States and other countries and the associated problems in mortgage markets, notably the collapse of the U.S. subprime mortgage market. Conditions in housing and mortgage markets have proved a serious drag on the broader economy both directly, through their impact on residential construction and related industries and on household wealth, and indirectly, through the effects of rising mortgage delinquencies on the health of financial institutions. Recent data show that residential construction and sales continue to be very weak, house prices continue to fall, and foreclosure starts remain at very high levels.

The financial crisis intensified significantly in September and October. In September, the Treasury and the Federal Housing Finance Agency placed the government-sponsored enterprises, Fannie Mae and Freddie Mac, into conservatorship, and Lehman Brothers Holdings filed for bankruptcy. In the following weeks, several other large financial institutions failed, came to the brink of failure, or were acquired by competitors under distressed circumstances. Losses at a prominent money market mutual fund prompted investors, who had traditionally considered money market mutual funds to be virtually risk-free, to withdraw large amounts from such funds. The resulting outflows threatened the stability of short-term funding markets, particularly the commercial paper market, upon which corporations rely heavily for their short-term borrowing needs. Concerns about potential losses also undermined confidence in wholesale bank funding markets, leading to further increases in bank borrowing costs and a tightening of credit availability from banks.

Recognizing the critical importance of the provision of credit to businesses and households from financial institutions, the Congress passed the Emergency Economic Stabilization Act last fall. Under the authority granted by this act, the Treasury purchased

preferred shares in a broad range of depository institutions to shore up their capital bases. During this period, the Federal Deposit Insurance Corporation (FDIC) introduced its Temporary Liquidity Guarantee Program, which expanded its guarantees of bank liabilities to include selected senior unsecured obligations and all non-interest-bearing transactions deposits. The Treasury--in concert with the Federal Reserve and the FDIC--provided packages of loans and guarantees to ensure the continued stability of Citigroup and Bank of America, two of the world's largest banks. Over this period, governments in many foreign countries also announced plans to stabilize their financial institutions, including through large-scale capital injections, expansions of deposit insurance, and guarantees of some forms of bank debt.

Faced with the significant deterioration in financial market conditions and a substantial worsening of the economic outlook, the Federal Open Market Committee (FOMC) continued to ease monetary policy aggressively in the final months of 2008, including a rate cut coordinated with five other major central banks. In December the FOMC brought its target for the federal funds rate to a historically low range of 0 to 1/4 percent, where it remains today. The FOMC anticipates that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for some time.

With the federal funds rate near its floor, the Federal Reserve has taken additional steps to ease credit conditions. To support housing markets and economic activity more broadly, and to improve mortgage market functioning, the Federal Reserve has begun to purchase large amounts of agency debt and agency mortgage-backed securities. Since the announcement of this program last November, the conforming fixed mortgage rate has fallen nearly 1 percentage point. The Federal Reserve also established new lending facilities and expanded existing facilities to enhance the flow of credit to businesses and households. In response to heightened stress in

bank funding markets, we increased the size of the Term Auction Facility to help ensure that banks could obtain the funds they need to provide credit to their customers, and we expanded our network of swap lines with foreign central banks to ease conditions in interconnected dollar funding markets at home and abroad. We also established new lending facilities to support the functioning of the commercial paper market and to ease pressures on money market mutual funds. In an effort to restart securitization markets to support the extension of credit to consumers and small businesses, we joined with the Treasury to announce the Term Asset-Backed Securities Loan Facility (TALF). The TALF is expected to begin extending loans soon.

The measures taken by the Federal Reserve, other U.S. government entities, and foreign governments since September have helped to restore a degree of stability to some financial markets. In particular, strains in short-term funding markets have eased notably since the fall, and London interbank offered rates (Libor)--upon which borrowing costs for many households and businesses are based--have decreased sharply. Conditions in the commercial paper market also have improved, even for lower-rated borrowers, and the sharp outflows from money market mutual funds seen in September have been replaced by modest inflows. Corporate risk spreads have declined somewhat from extraordinarily high levels, although these spreads remain elevated by historical standards. Likely spurred by the improvements in pricing and liquidity, issuance of investment-grade corporate bonds has been strong, and speculative-grade issuance, which was near zero in the fourth quarter, has picked up somewhat. As I mentioned earlier, conforming fixed mortgage rates for households have declined. Nevertheless, despite these favorable developments, significant stresses persist in many markets. Notably, most securitization markets remain shut, other than that for conforming mortgages, and some financial institutions remain under pressure.

In light of ongoing concerns over the health of financial institutions, the Secretary of the Treasury recently announced a plan for further actions. This plan includes four principal elements: First, a new capital assistance program will be established to ensure that banks have adequate buffers of high-quality capital, based on the results of comprehensive stress tests to be conducted by the financial regulators, including the Federal Reserve. Second is a public-private investment fund in which private capital will be leveraged with public funds to purchase legacy assets from financial institutions. Third, the Federal Reserve, using capital provided by the Treasury, plans to expand the size and scope of the TALF to include securities backed by commercial real estate loans and potentially other types of asset-backed securities as well. Fourth, the plan includes a range of measures to help prevent unnecessary foreclosures. Together, over time these initiatives should further stabilize our financial institutions and markets, improving confidence and helping to restore the flow of credit needed to promote economic recovery.

**Federal Reserve Transparency**

The Federal Reserve is committed to keeping the Congress and the public informed about its lending programs and balance sheet. For example, we continue to add to the information shown in the Fed's H.4.1 statistical release, which provides weekly detail on the balance sheet and the amounts outstanding for each of the Federal Reserve's lending facilities. Extensive additional information about each of the Federal Reserve's lending programs is available online.[1] The Fed also provides bimonthly reports to the Congress on each of its programs that rely on the section 13(3) authorities. Generally, our disclosure policies reflect the current best practices of major central banks around the world. In addition, the Federal Reserve's internal controls and

[1] For links and references, see Ben S. Bernanke (2009), "Federal Reserve Programs to Strengthen Credit Markets and the Economy," testimony before the Committee on Financial Services, U.S. House of Representatives, February 10, http://www.federalreserve.gov/newsevents/testimony/bernanke20090210a.htm.

management practices are closely monitored by an independent inspector general, outside private-sector auditors, and internal management and operations divisions, and through periodic reviews by the Government Accountability Office.

All that said, we recognize that recent developments have led to a substantial increase in the public's interest in the Fed's programs and balance sheet. For this reason, we at the Fed have begun a thorough review of our disclosure policies and the effectiveness of our communication. Today I would like to highlight two initiatives.

First, to improve public access to information concerning Fed policies and programs, we recently unveiled a new section of our website that brings together in a systematic and comprehensive way the full range of information that the Federal Reserve already makes available, supplemented by explanations, discussions, and analyses.[2] We will use that website as one means of keeping the public and the Congress fully informed about Fed programs.

Second, at my request, Board Vice Chairman Donald Kohn is leading a committee that will review our current publications and disclosure policies relating to the Fed's balance sheet and lending policies. The presumption of the committee will be that the public has a right to know, and that the nondisclosure of information must be affirmatively justified by clearly articulated criteria for confidentiality, based on factors such as reasonable claims to privacy, the confidentiality of supervisory information, and the need to ensure the effectiveness of policy.

**The Economic Outlook and the FOMC's Quarterly Projections**

In their economic projections for the January FOMC meeting, monetary policy makers substantially marked down their forecasts for real GDP this year relative to the forecasts they had prepared in October. The central tendency of their most recent projections for real GDP implies a decline of 1/2 percent to 1-1/4 percent over the four quarters of 2009. These projections reflect

[2] The website is located at http://www.federalreserve.gov/monetarypolicy/bst.htm.

an expected significant contraction in the first half of this year combined with an anticipated gradual resumption of growth in the second half. The central tendency for the unemployment rate in the fourth quarter of 2009 was marked up to a range of 8-1/2 percent to 8-3/4 percent. Federal Reserve policymakers continued to expect moderate expansion next year, with a central tendency of 2-1/2 percent to 3-1/4 percent growth in real GDP and a decline in the unemployment rate by the end of 2010 to a central tendency of 8 percent to 8-1/4 percent. FOMC participants marked down their projections for overall inflation in 2009 to a central tendency of 1/4 percent to 1 percent, reflecting expected weakness in commodity prices and the disinflationary effects of significant economic slack. The projections for core inflation also were marked down, to a central tendency bracketing 1 percent. Both overall and core inflation are expected to remain low over the next two years.

This outlook for economic activity is subject to considerable uncertainty, and I believe that, overall, the downside risks probably outweigh those on the upside. One risk arises from the global nature of the slowdown, which could adversely affect U.S. exports and financial conditions to an even greater degree than currently expected. Another risk derives from the destructive power of the so-called adverse feedback loop, in which weakening economic and financial conditions become mutually reinforcing. To break the adverse feedback loop, it is essential that we continue to complement fiscal stimulus with strong government action to stabilize financial institutions and financial markets. If actions taken by the Administration, the Congress, and the Federal Reserve are successful in restoring some measure of financial stability--and only if that is the case, in my view--there is a reasonable prospect that the current recession will end in 2009 and that 2010 will be a year of recovery. If financial conditions improve, the economy will be increasingly supported by fiscal and monetary stimulus, the

salutary effects of the steep decline in energy prices since last summer, and the better alignment of business inventories and final sales, as well as the increased availability of credit.

To further increase the information conveyed by the quarterly projections, FOMC participants agreed in January to begin publishing their estimates of the values to which they expect key economic variables to converge over the longer run (say, at a horizon of five or six years), under the assumption of appropriate monetary policy and in the absence of new shocks to the economy. The central tendency for the participants' estimates of the longer-run growth rate of real GDP is 2-1/2 percent to 2-3/4 percent; the central tendency for the longer-run rate of unemployment is 4-3/4 percent to 5 percent; and the central tendency for the longer-run rate of inflation is 1-3/4 percent to 2 percent, with the majority of participants looking for 2 percent inflation in the long run. These values are all notably different from the central tendencies of the projections for 2010 and 2011, reflecting the view of policymakers that a full recovery of the economy from the current recession is likely to take more than two or three years.

The longer-run projections for output growth and unemployment may be interpreted as the Committee's estimates of the rate of growth of output and the unemployment rate that are sustainable in the long run in the United States, taking into account important influences such as the trend growth rates of productivity and the labor force, improvements in worker education and skills, the efficiency of the labor market at matching workers and jobs, government policies affecting technological development or the labor market, and other factors. The longer-run projections of inflation may be interpreted, in turn, as the rate of inflation that FOMC participants see as most consistent with the dual mandate given to it by the Congress--that is, the rate of inflation that promotes maximum sustainable employment while also delivering reasonable price stability. This further extension of the quarterly projections should provide the

public a clearer picture of the FOMC's policy strategy for promoting maximum employment and price stability over time. Also, increased clarity about the FOMC's views regarding longer-run inflation should help to better stabilize the public's inflation expectations, thus contributing to keeping actual inflation from rising too high or falling too low.

At the time of our last Monetary Policy Report, the Federal Reserve was confronted with both high inflation and rising unemployment. Since that report, however, inflation pressures have receded dramatically while the rise in the unemployment rate has accelerated and financial conditions have deteriorated. In light of these developments, the Federal Reserve is committed to using all available tools to stimulate economic activity and to improve financial market functioning. Toward that end, we have reduced the target for the federal funds rate close to zero and we have established a number of programs to increase the flow of credit to key sectors of the economy. We believe that these actions, combined with the broad range of other fiscal and financial measures being put in place, will contribute to a gradual resumption of economic growth and improvement in labor market conditions in a context of low inflation. We will continue to work closely with the Congress and the Administration to explore means of fulfilling our mission of promoting maximum employment and price stability.

For use at 10:00 a.m., EST
February 24, 2009

# Monetary Policy Report to the Congress

February 24, 2009

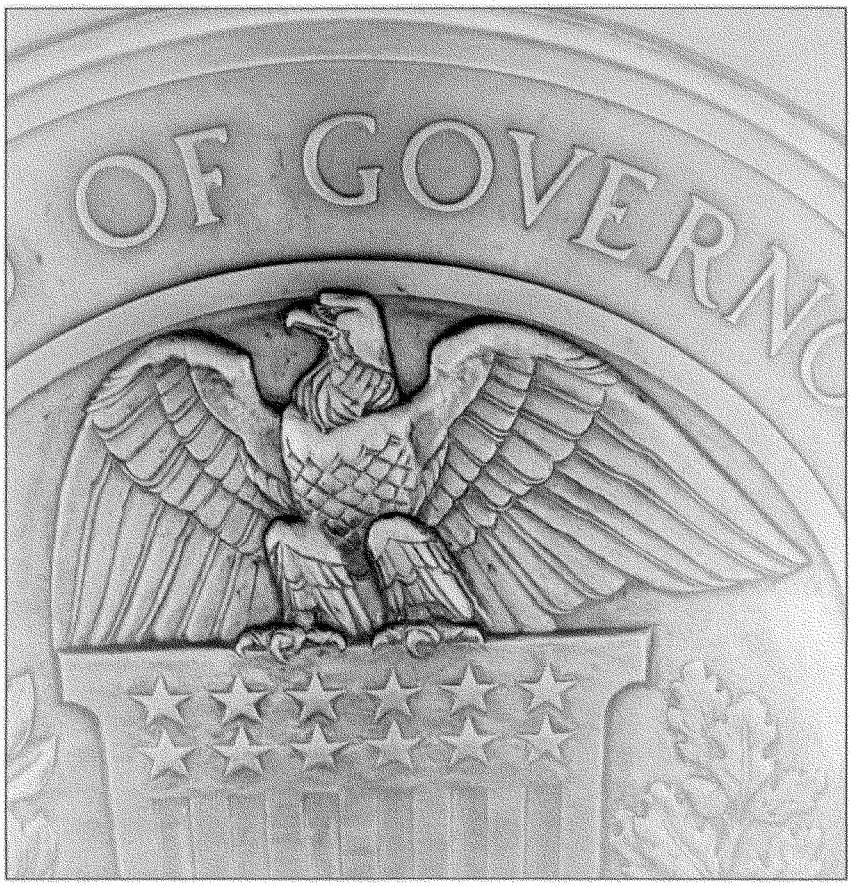



Board of Governors of the Federal Reserve System

# Monetary Policy Report to the Congress

## Submitted pursuant to section 2B of the Federal Reserve Act

February 24, 2009




**Board of Governors of the Federal Reserve System**

# Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM

Washington, D.C., February 24, 2009

THE PRESIDENT OF THE SENATE
THE SPEAKER OF THE HOUSE OF REPRESENTATIVES

The Board of Governors is pleased to submit its *Monetary Policy Report to the Congress* pursuant to section 2B of the Federal Reserve Act.

Sincerely,

Ben Bernanke, Chairman

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# Part 1
# Overview: Monetary Policy and the Economic Outlook

The U.S. economy weakened markedly in the second half of 2008 as the turmoil in financial markets intensified, credit conditions tightened further, and asset values continued to slump. Conditions in the labor market worsened significantly after early autumn, and nearly all major sectors of the economy registered steep declines in activity late last year. Meanwhile, inflation pressures diminished appreciably as prices of energy and other commodities dropped sharply, the margin of resource slack in the economy widened, and the foreign exchange value of the dollar strengthened.

The second half of 2008 saw an intensification of the financial and economic strains that had initially been triggered by the end of the housing boom in the United States and other countries and the associated problems in mortgage markets. The ensuing turmoil in global credit markets affected asset values, credit conditions, and business and consumer confidence around the world. Over the summer, a weakening U.S. economy and continued financial turbulence led to a broad loss of confidence in the financial sector. In September, the government-sponsored enterprises Fannie Mae and Freddie Mac were placed into conservatorship by their regulator, and Lehman Brothers Holdings filed for bankruptcy. The insurance company American International Group, Inc., or AIG, also came under severe pressure, and the Federal Reserve, with the full support of the Treasury, agreed to provide substantial liquidity to the company. In addition, a number of other financial institutions failed or were acquired by competitors. As a result of the Lehman Brothers bankruptcy, a prominent money market mutual fund suffered capital losses, which prompted investors to withdraw large amounts from such funds. The resulting massive outflows undermined the stability of short-term funding markets, particularly the commercial paper market, upon which corporations rely heavily to meet their short-term borrowing needs. Against this backdrop, investors pulled back broadly from risk-taking in September and October, liquidity in short-term funding markets vanished for a time, and prices plunged across asset classes. Securitization markets, with the exception of those for government-supported mortgages, essentially shut down.

Reflecting in part the adverse developments in financial markets, economic activity dropped sharply in late 2008 and has continued to contract so far in 2009. In the labor market, the pace of job losses quickened considerably beginning last autumn, the unemployment rate has risen to its highest level since the early 1990s, and other measures of labor market conditions—for example, the number of persons working part time because full-time jobs are not available—have worsened noticeably. The deteriorating job market, along with the sizable losses of equity and housing wealth and the tightening of credit conditions, has depressed consumer sentiment and spending; these factors have also contributed to the continued steep decline in housing activity. In addition, businesses have instituted widespread cutbacks in capital spending in response to the weakening outlook for sales and production as well as the difficult credit environment. And in contrast to the first half of the year—when robust demand for U.S. exports provided some offset to the softness in domestic demand—exports slumped in the second half as economic activity abroad fell. In all, real gross domestic product (GDP) in the United States declined slightly in the third quarter of 2008 and is currently estimated by the Bureau of Economic Analysis to have dropped at an annual rate of 3¾ percent in the fourth quarter; real GDP seems headed for another considerable decrease in the first quarter of 2009.

The downturn in sales and production, along with steep declines in the prices of energy and other commodities and a strengthening in the exchange value of the dollar, has contributed to a substantial lessening of inflation pressures in the past several months. Indeed, overall inflation, as measured by the price index for personal consumption expenditures, turned negative in the fourth quarter of 2008; over the first three quarters of the year, overall inflation had averaged nearly 4½ percent at an annual rate, largely because of sharp increases in food and energy prices. Core inflation—which excludes the direct effects of movements in food and energy prices—also slowed significantly late last year and entered 2009 at a subdued pace. Mirroring the drop in headline inflation, survey measures of near-term inflation expectations have fallen to very low levels in

recent months, while the latest readings on longer-term inflation expectations are similar to those in 2007 and early 2008.

The Federal Reserve has responded forcefully to the crisis since its emergence in the summer of 2007. By the middle of last year, the Federal Open Market Committee (FOMC) had lowered the federal funds rate 325 basis points.[1] And as indications of economic weakness proliferated and the financial turbulence intensified in the second half, the FOMC continued to ease monetary policy aggressively; at its December meeting, the Committee established a target range for the federal funds rate of 0 to ¼ percent and indicated that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for some time.

In addition, the Federal Reserve took a number of measures during the second half of 2008 to shore up financial markets and support the flow of credit to businesses and households. (See the appendix for descriptions of these programs.) In response to intensified stresses in dollar funding markets, the Federal Reserve announced extensions of its Term Auction Facility and significantly expanded its network of liquidity swap lines with foreign central banks. To support the functioning of the commercial paper market in the aftermath of the Lehman Brothers bankruptcy, the Federal Reserve established the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility in September as well as the Commercial Paper Funding Facility and Money Market Investor Funding Facility in October. In an effort to restart certain securitization markets and support extensions of credit to consumers, the Federal Reserve in November announced the Term Asset-Backed Securities Loan Facility, which is scheduled to begin operation in coming weeks. To support the mortgage and housing markets and the economy more broadly and to encourage better functioning in the market for agency securities, the Federal Reserve announced programs in November to purchase agency-guaranteed mortgage-backed securities and agency debt. These initiatives have resulted in a notable expansion of the Federal Reserve's balance sheet, and the FOMC has indicated that it expects the size of the balance sheet to remain at a high level for some time as a result of open market operations and other measures to support financial markets and to provide additional stimulus to the economy in an environment of very low short-term interest rates.

Other U.S. government entities and foreign governments also implemented a variety of policy measures in response to the intensification of financial strains over the course of the fall and winter. The Treasury announced a temporary guarantee of the share prices of money market mutual funds and, beginning in October, used authority granted under the Emergency Economic Stabilization Act to purchase preferred shares in a large number of depository institutions. That same month, the Federal Deposit Insurance Corporation (FDIC) introduced a Temporary Liquidity Guarantee Program under which it offers guarantees for selected senior unsecured obligations of participating insured depository institutions and many of their parent holding companies as well as for all balances in non-interest-bearing transaction deposit accounts at participating insured depository institutions. In November, Citigroup came under significant financial pressure. In response, the FDIC, the Treasury, and the Federal Reserve provided a package of loans and guarantees to bolster Citigroup's financial condition; a similar package was arranged for Bank of America in January. Since October, governments in many advanced economies have announced support plans for their banking systems. These programs have included large-scale capital injections, expansions of deposit insurance, and guarantees of some forms of bank debt.

The measures taken by the Federal Reserve, other U.S. government entities, and foreign governments have helped restore a degree of stability to some financial markets. In particular, strains in short-term funding markets have eased noticeably since the fall, some corporate risk spreads have declined modestly, and measures of volatility have generally retreated. Nevertheless, significant stress persists in most markets, and financial institutions remain under considerable pressure; as a result, the flow of credit to households and businesses continues to be impaired.

In conjunction with the January 2009 FOMC meeting, the members of the Board of Governors of the Federal Reserve System and presidents of the Federal Reserve Banks, all of whom participate in FOMC meetings, provided projections for economic growth, unemployment, and inflation; these projections are presented in part 4 of this report. Given the strength of the forces weighing on the economy, FOMC participants viewed the outlook as having weakened significantly in recent months. Participants generally expected economic activity to contract sharply in the near term and then to move onto a path of gradual recovery, bolstered by monetary easing, government efforts to stabilize financial markets, and fiscal stimulus. Participants expected total and core inflation to be lower in 2009 than over the four quarters of 2008, in large measure because of the recent declines in commodity prices and rising

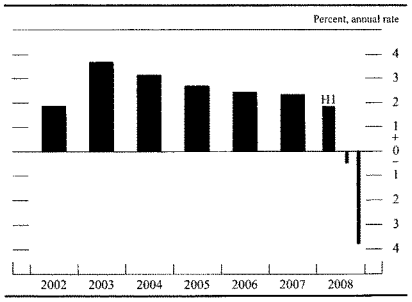
1. A list of abbreviations is available at the end of this report.

slack in resource utilization; inflation was forecast to remain low in 2010 and 2011. Participants generally judged that the degree of uncertainty surrounding the outlook for both economic activity and inflation was greater than historical norms. Most participants viewed the risks to growth as skewed to the downside, and nearly all saw the risks to the inflation outlook as either balanced or tilted to the downside. Participants also reported their assessments of the rates to which macroeconomic variables would be expected to converge over the longer run under appropriate monetary policy and in the absence of further shocks to the economy. The central tendencies of these longer-run projections were 2.5 percent to 2.7 percent for real GDP growth, 4.8 percent to 5.0 percent for the unemployment rate, and 1.7 percent to 2.0 percent for the inflation rate.

# Part 2
# Recent Financial and Economic Developments

The downturn in economic activity that has been unfolding since late 2007 steepened appreciably in the second half of 2008 as the strains in financial markets intensified. After the financial difficulties experienced by Fannie Mae and Freddie Mac during the summer and the bankruptcy of Lehman Brothers Holdings in mid-September, short-term funding markets were severely disrupted, risk spreads shot up, equity prices plunged, and markets for private asset-backed securities remained largely shut down. As a result, pressures on the already strained balance sheets of financial institutions increased, thereby threatening the viability of some institutions and impinging on the flow of credit to households and businesses. In part reflecting the cascading effects of these developments throughout the wider economy, conditions in the labor market deteriorated markedly. Moreover, industrial production contracted sharply as manufacturers responded aggressively to declines in both domestic and foreign demand. According to the advance estimate from the Bureau of Economic Analysis, real gross domestic product (GDP) fell at an annual rate of 3¾ percent in the fourth quarter, and it seems headed for another sizable decrease in the first quarter of 2009 (figure 1). Meanwhile, inflation pressures have diminished as prices of energy and other commodities have plummeted, the margin of resource slack has widened, and the foreign exchange value of the dollar has strengthened (figure 2).

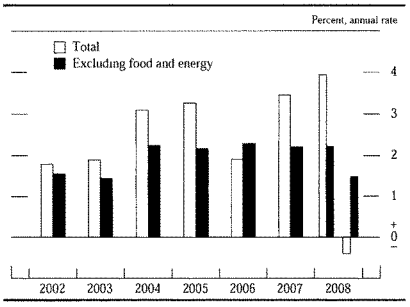
1. Change in real gross domestic product, 2002–08




NOTE Here and in subsequent figures, except as noted, change for a given period is measured to its final quarter from the final quarter of the preceding period

SOURCE Department of Commerce, Bureau of Economic Analysis

2. Change in the chain-type price index for personal consumption expenditures, 2002–08




SOURCE Department of Commerce, Bureau of Economic Analysis

In response to the extraordinary financial strains, the Federal Reserve implemented a number of unprecedented policy initiatives to support financial stability and promote economic growth. These initiatives included lowering the target for the federal funds rate to a range of 0 to ¼ percent, beginning direct purchases of agency debt and agency mortgage-backed securities, broadening liquidity programs to financial intermediaries and other central banks, and initiating programs in support of systemically important market segments. Other U.S. government entities also undertook extraordinary initiatives to support the financial sector by injecting capital into the banking system and providing guarantees on selected liabilities of depository institutions. Many foreign central banks and governments took similar steps. Although these actions have helped restore a measure of stability to some markets, financial conditions remain quite stressed, and aggregate credit conditions continue to be impaired as a result.

## *Financial Stability Developments*

### Evolution of the Financial Turmoil

The current period of pronounced turmoil in financial markets began in the summer of 2007 after a rapid deterioration in the performance of subprime mortgages

caused largely by a downturn in house prices in some parts of the country. Investors pulled back from risk-taking, and liquidity diminished sharply in the markets for interbank funding and structured credit products more generally. House prices continued to fall rapidly in the first part of 2008, mortgage delinquencies and defaults continued to climb, and concerns about credit risk mounted. The increased financial strains led to a liquidity crisis in March at The Bear Stearns Companies, Inc., a major investment bank, and to its acquisition by JPMorgan Chase & Co. Subsequent aggressive monetary policy easing and measures taken by the Federal Reserve to bolster the liquidity of financial institutions contributed to some recovery in financial markets during the spring.

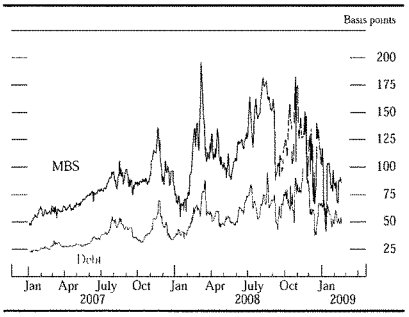
Nevertheless, strains in financial conditions intensified going into the second half of the year. In particular, amid worries that the capital of Fannie Mae and Freddie Mac would be insufficient to absorb mounting losses on their mortgage portfolios, the stock prices of the two government-sponsored enterprises (GSEs) began to decline significantly in June, and their credit default swap (CDS) spreads—which reflect investors' assessments of the likelihood of the GSEs defaulting on their debt obligations—rose sharply. Market anxiety eased somewhat in the second half of July after the Treasury proposed statutory changes, subsequently approved by the Congress, under which it could lend and provide capital to the GSEs. Nevertheless, pressures on these enterprises continued over the course of the summer; as a result, option-adjusted spreads on agency-guaranteed mortgage-backed securities (MBS) widened and interest rates on residential mortgages rose further (figure 3).

Meanwhile, investor unease about the outlook for the broader banking sector reemerged. In July, the failure of IndyMac Federal Bank, a large thrift institution, raised further concerns about the profitability and asset quality of many financial institutions. Over the summer, CDS spreads for major investment and commercial banks rose, several large institutions announced sharp declines in earnings, and anecdotal reports suggested that the ability of most financial firms to raise new capital was limited (figure 4). With banks reluctant to lend to one another, conditions in short-term funding markets continued to be strained during the summer. The relative cost of borrowing in the interbank market—as exemplified by the London interbank offered rate (Libor), a reference rate for a wide variety of contracts, including floating-rate mortgages—increased sharply (figure 5).[2] In addition, required margins of collateral (known as haircuts) and bid-asked spreads widened in the markets for repurchase agreements (repos) backed by many types of securities, including agency securities that previously were considered very safe and liquid.

On September 7, the Treasury and the Federal Housing Finance Agency announced that Fannie Mae and Freddie Mac had been placed into conservatorship. To maintain the GSEs' ability to purchase home mortgages, the Treasury announced plans to establish a backstop lending facility for the GSEs, to purchase up to $100 bil-

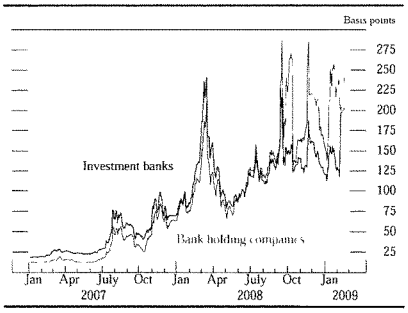
2. Typically, the relative cost is measured by comparing the Libor rate with the rate on comparable-maturity overnight index swaps.

3. Spreads on 10-year Fannie Mae debt and option-adjusted spreads on Fannie Mae mortgage backed securities, 2007–09



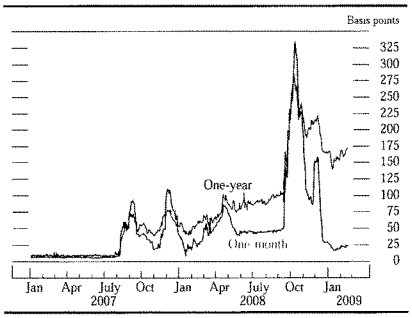

NOTE The data are daily and extend through February 18, 2009. The spreads are over Treasury securities of comparable maturities. MBS are mortgage backed securities.
SOURCE For MBS, Bloomberg; for debt, Merrill Lynch and the Federal Reserve Bank of New York.

4. Spreads on credit default swaps for selected U.S. financial companies, 2007–09




NOTE The data are daily and extend through February 18, 2009. Median spreads for six bank holding companies and nine investment banks.
SOURCE Markit

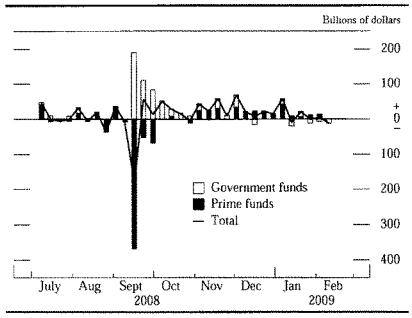
5. Libor minus overnight index swap rate, 2007–09




NOTE The data are daily and extend through February 19, 2009. An overnight index swap (OIS) is an interest rate swap with the floating rate tied to an index of daily overnight rates, such as the effective federal funds rate. At maturity, two parties exchange, on the basis of the agreed notional amount, the difference between interest accrued at the fixed rate and interest accrued by averaging the floating, or index, rate. Libor is the London interbank offered rate.

SOURCE For Libor, British Bankers' Association; for the OIS rate, Prebon.

6. Net flows into taxable U.S. money market mutual funds, 2008–09




NOTE Data are weekly and extend through February 13, 2009.

SOURCE iMoneyNet.

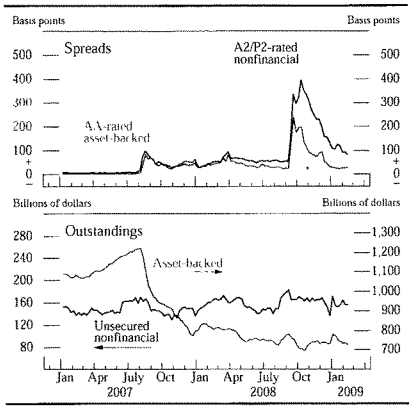
lion of preferred stock in each of the two firms, and to initiate a program to purchase agency MBS. After the announcement, interest rate spreads on GSE debt narrowed as investors became confident that the Treasury would support the obligations of the GSEs. Option-adjusted interest rate spreads on MBS issued by the GSEs fell, and rates and spreads on new conforming fixed-rate mortgages declined. Nevertheless, other financial institutions continued to face difficulties in obtaining liquidity and capital as investors remained anxious about their solvency and, more broadly, about the implications of worsening financial conditions for the availability of credit to households and businesses and so for the economic outlook.

Amid this broad downturn in investor confidence, and after large mortgage-related losses in the third quarter, Lehman Brothers came under pressure as counterparties refused to provide short-term funding to the investment bank, even on a secured basis. Eventually, with no other firm willing to acquire it and with its borrowing capacity limited by a lack of collateral, Lehman Brothers filed for bankruptcy on September 15.[3] Over the previous weekend, Bank of America announced its intention to acquire Merrill Lynch, which had also come under severe funding pressures. In large part because of losses on Lehman Brothers' debt, the net asset value of a major money market mutual fund fell below $1 per share—also known as "breaking the buck," an event that had not occurred in many years—thereby prompting rapid and widespread investor withdrawals from prime funds (that is, money market mutual funds that hold primarily private assets) (figure 6). Prime funds responded to the surge in redemptions by reducing their purchases of short-term assets, including commercial paper—which many businesses use to obtain working capital—and by shortening the maturity of those instruments that they did purchase, leading to a deterioration of the commercial paper market (figure 7). Meanwhile, investors increasingly demanded safe assets, and funds that hold only Treasury securities experienced a sharp increase in inflows, which caused yields on Treasury bills to plummet. Intense demands among investors to hold Treasury securities, coupled with increased concerns about counterparty credit risk, reportedly led to a substantial scaling back of activity among traditional securities lenders in the Treasury market. The decreased activity contributed, in turn, to disruptions in the Treasury repo and cash markets that were evidenced by a very high volume of fails-to-deliver. Redemptions from prime funds slowed after the Treasury and the Federal Reserve took actions in September and October to support these funds (see the appendix).

Around the same time that the difficulties at Lehman Brothers emerged, the financial condition of American International Group, Inc., or AIG—a large, complex insurance conglomerate—deteriorated rapidly, and the company found short-term funding, upon which it was heavily reliant, increasingly difficult to obtain. In view

3. The bankruptcy of Lehman Brothers and the conservatorship of Fannie Mae and Freddie Mac constituted credit events of unprecedented scale for the CDS market. Nevertheless, settlement of the outstanding CDS contracts on these entities proceeded smoothly over the subsequent weeks, apparently due in part to the increased margins demanded by holders of CDS protection in the period leading up to early September.

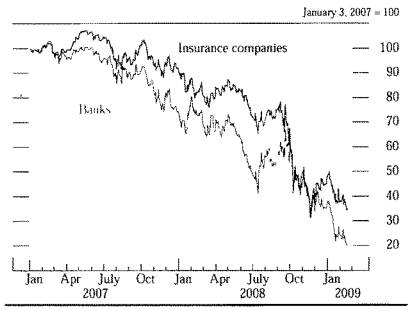
7. Commercial paper, 2007–09




NOTE The data are weekly and extend through February 18, 2009. Commercial paper yield spreads are for an overnight maturity and are expressed relative to the AA nonfinancial rate. Outstandings are seasonally adjusted.

SOURCE Depository Trust and Clearing Corporation.

8. Prices of exchange-traded funds on selected U.S. financial sectors, 2007–09




NOTE The data are daily and extend through February 18, 2009; they cover 24 banks and 24 insurance companies.

SOURCE Keefe, Bruyette & Woods (KBW) and Bloomberg.

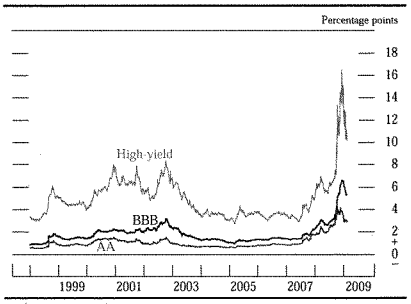
of the likely spillover effects to other financial institutions of a disorderly failure of AIG and the potential for significant pass-through effects to the broader economy, the Federal Reserve Board on September 16, with the full support of the Treasury, authorized the Federal Reserve Bank of New York to lend up to $85 billion to the firm to assist it in meeting its obligations and to facilitate the orderly sale of some of its businesses. (AIG, the Treasury, and the Federal Reserve later modified the terms of this arrangement, as described in the appendix.) Meanwhile, CDS spreads for other insurance companies rose, and their equity prices fell, amid concerns regarding their profitability and declines in the values of their investment portfolios (figure 8).

Investor anxiety about investment banks, which had escalated rapidly in the wake of Lehman Brothers' collapse, abated somewhat after Morgan Stanley and Goldman Sachs were granted bank holding company charters by the Federal Reserve. However, on September 25 the resolution of another failing financial institution, Washington Mutual, imposed significant losses on senior and subordinated debt holders as well as on shareholders. As a consequence, investors marked down their expectations regarding likely government support for the unsecured nondeposit liabilities of financial institutions, which further inhibited the ability of some banking organizations to obtain funding. Among these institutions was Wachovia Corp., the parent company of the fourth-largest U.S. bank by asset size at the time, which was ultimately acquired by Wells Fargo in early October.

Against this backdrop, investors pulled back from risk-taking even further, funding markets for terms beyond overnight largely ceased to function, and a wide variety of financial firms experienced increasing difficulty in obtaining funds and raising capital. Libor rates rose at all maturities while comparable-maturity overnight index swap (OIS) rates fell, leaving spreads at record levels. Strains were also evident in the federal funds market, in which overnight funds traded over an unusually wide range and activity in term funds dropped sharply. Conditions in repo markets worsened further, as haircuts and bid-asked spreads on non-Treasury collateral increased, and the overnight rate on general Treasury collateral traded near zero. Despite substantial new issuance, yields on short-dated Treasury bills also traded near zero. Fails-to-deliver in the Treasury market and overnight lending of securities from the portfolio of the System Open Market Account soared to record highs. Spreads on asset-backed commercial paper (ABCP) and on lower-rated unsecured commercial paper issued by nonfinancial firms widened significantly.

Conditions in other financial markets also deteriorated sharply in September and October. CDS spreads on corporate debt surged, and the rates on investment-grade and high-yield bonds rose dramatically relative to comparable-maturity Treasury yields (figure 9). Secondary-market bid prices for leveraged loans dropped to record-low levels as institutional investors pulled back from the market, and the implied spread on an index of loan credit default swaps (the LCDX)

9. Spreads of corporate bond yields over comparable off-the-run Treasury yields, by securities rating, 1998–2009

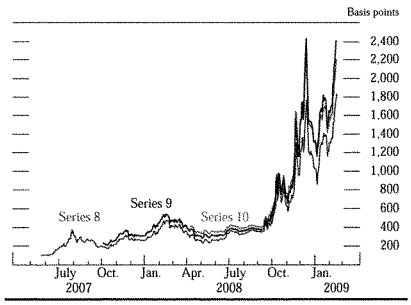



NOTE: The data are daily and extend through February 18, 2009. The spreads shown are the yields on 10-year bonds less the 10-year Treasury yield.

SOURCE: Derived from smoothed corporate yield curves using Merrill Lynch bond data.

widened to record levels (figure 10). Bid-asked spreads on high-yield corporate bonds and leveraged loans increased significantly, and liquidity and price discovery in the CDS market remained impaired, especially for contracts involving financial firms. Spreads on commercial mortgage-backed securities (CMBS) and consumer asset-backed securities (ABS) also widened dramatically, as securitizations other than government-supported MBS came to a standstill (figure 11). The turmoil affected even the Treasury market, in which interest rate spreads between yields on the most recently issued

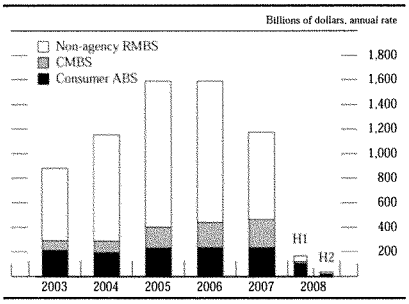
10. LCDX indexes, 2007–09




NOTE: The data are daily and extend through February 18, 2009. Each LCDX index consists of 100 single-name credit default swaps referencing entities with first-lien syndicated loans that trade in the secondary market for leveraged loans. Series 8 began trading on May 22, 2007, series 9 on October 3, 2007, and series 10 on April 8, 2008.

SOURCE: Markit.

11. Gross issuance of selected mortgage- and asset-backed securities, 2003–08




NOTE: Non-agency RMBS are residential mortgage-backed securities issued by institutions other than Fannie Mae, Freddie Mac, and Ginnie Mae; CMBS are commercial mortgage-backed securities; consumer ABS (asset-backed securities) are securities backed by credit card loans, nonrevolving consumer loans, and auto loans.

SOURCE: For RMBS and ABS, *Inside MBS & ABS* and Merrill Lynch; for CMBS, Commercial Mortgage Alert.

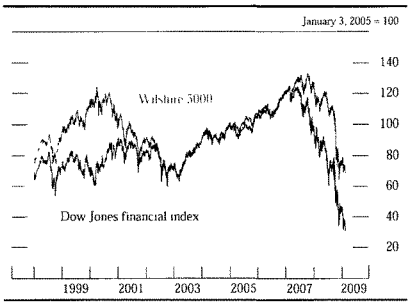
Treasury securities and yields on comparable-maturity off-the-run securities (that is, those securities that were previously issued)—an indicator of the liquidity in this market—surged from already elevated levels. Foreign financial markets experienced many of the same disturbances as domestic markets (see the section "International Developments"). Price movements in all of these markets were likely exacerbated by sales of securities by hedge funds and other leveraged market participants in an attempt to meet mounting redemption requests on the part of their investors and other funding needs.

In the stock market, prices tumbled and volatility soared to record levels during the autumn as investors grew more concerned about the prospects of financial firms and about the likelihood of a deep and prolonged recession (figures 12 and 13). Equity-price declines were particularly pronounced among financial and energy firms, but they were generally widespread across sectors and were accompanied by substantial net outflows from equity mutual funds. During this period, the premium that investors demanded for holding equity shares—gauged roughly by the gap between the earnings-price ratio and the yield on Treasury securities—shot up, reflecting the heightened risk aversion that prevailed in financial markets.

## Policy Actions and the Market Response

To strengthen confidence in the U.S. financial system, during the autumn the Federal Reserve, at times act-

12. Stock price indexes, 1998–2009

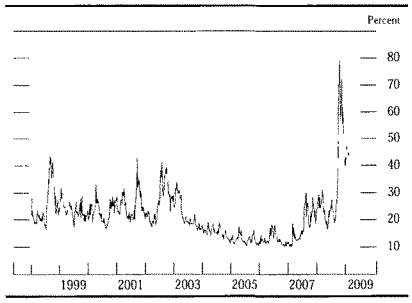



NOTE The data are daily and extend through February 18, 2009
SOURCE Dow Jones Indexes

ing in concert with foreign central banks, expanded its existing liquidity facilities and announced several additional initiatives, including programs to support short-term funding markets and to purchase agency debt obligations and MBS. (These initiatives are discussed in more detail in the appendix.) Because of the sharply diminished availability of market funding, several Federal Reserve facilities were used heavily throughout the remainder of the year.

In addition, the Treasury announced a temporary guarantee program for money market mutual funds and proposed the Troubled Asset Relief Program (TARP) to use government funds to help stabilize the financial system; on October 3, the Congress approved and provided funding for this program as part of the Emergency Economic Stabilization Act. Using funds from the TARP, the Treasury established a voluntary capital purchase plan under which the U.S. government would buy preferred shares from eligible institutions. Additionally, under the Temporary Liquidity Guarantee Program (TLGP), the Federal Deposit Insurance Corporation (FDIC) provided a temporary guarantee for selected senior unsecured obligations of participating insured depository institutions and many of their parent holding companies as well as for all balances in non-interest-bearing transaction deposit accounts at participating insured depository institutions.

13. Implied S&P 500 volatility, 1998–2009




NOTE. The data are weekly and extend through the week ending February 20, 2009 The final observation is an estimate based on data through February 18, 2009 The series shown — the VIX — is the implied 30-day volatility of the S&P 500 stock price index as calculated from a weighted average of options prices
SOURCE Chicago Board Options Exchange

After these actions and the announcements of similar programs in a number of other countries, stresses in financial markets eased somewhat, though conditions remained strained. In the interbank funding market, Libor fixings at most maturities declined noticeably and spreads over comparable-maturity OIS rates narrowed. Meanwhile, spreads on highly rated unsecured commercial paper and ABCP narrowed after the Federal Reserve announced measures in support of this market, and issuance rebounded somewhat from its lows in September and October. Conditions in global short-term dollar funding markets also improved significantly after the Federal Reserve substantially expanded its program of liquidity swaps with foreign central banks, which increased the amount of dollar funding auctioned in foreign markets, and a number of foreign governments took measures to strengthen and stabilize their banking systems.

Despite these improvements, investors remained concerned about the soundness of financial institutions. Spreads on CDS for U.S. banks widened further in November, which raised the prospect of significant increases in banks' costs of raising the funds they needed for lending. Citigroup, in particular, saw its CDS spread widen dramatically after it announced that it would take large losses on its securities portfolio. To support market stability, the U.S. government on November 23 entered into an agreement with Citigroup to provide a package of capital, guarantees, and liquidity access. Subsequently, CDS spreads for financial institutions reversed a portion of their earlier widening, and some nonfinancial risk spreads also narrowed.

Conditions in debt markets continued to ease after the passing of year-end, although most of these markets remain much less liquid than normal. Yields and spreads on corporate bonds and commercial paper have decreased noticeably in recent weeks, but activity in the leveraged loan market continues to be very weak. Equity prices for financial firms have continued to trend downward, and CDS spreads for such firms have fluctuated around extremely elevated levels. Investors

expressed renewed concern over financial institutions in January after a number of firms, most notably Bank of America Corporation, reported large net losses for the fourth quarter. The Treasury, the FDIC, and the Federal Reserve announced on January 16 that they had entered into an agreement with Bank of America to provide a package of capital, guarantees, and liquidity access (see the appendix). Although markets responded favorably to this action, the uncertain prospects of the financial sector continue to weigh heavily on market sentiment.

## Banking Institutions and the Availability of Credit

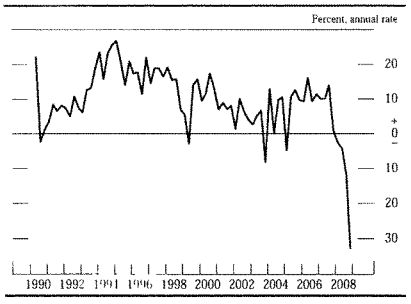
Commercial bank credit grew moderately over 2008 as a whole as both businesses and households at times drew heavily on existing lending commitments, but it contracted noticeably toward the end of the year and in early 2009. In the face of the severe financial market disruptions, some companies turned to already committed lines of credit with banks, which caused the growth of commercial and industrial (C&I) loans to spike in September and October. However, C&I lending declined over the past few months as some businesses reportedly paid down outstanding loans and stepped up their issuance in the corporate bond market. In addition, banks continued to report decreased demand for credit late last year in response to slowing business investment and reduced merger and acquisition activity. Most banks continued to tighten standards and terms on C&I loans to firms of all sizes. Issuance of leveraged loans by banks, which had already been very low through the first half of last year, was essentially nil in the second half, largely because of a drop in mergers and leveraged buyouts, which these loans are often used to finance. Commercial real estate (CRE) loans on banks' books expanded over 2008 as a whole. However, with the commercial mortgage securitization market essentially closed by mid-year, the rate of growth of this loan category stepped down significantly in the second half—a decrease consistent with the reported tightening of standards and a drop-off in demand for these loans.

Bank loans to households also declined over the second half of 2008 and early 2009, led by a sharp contraction in residential mortgage loans on banks' books, as demand weakened further and banks sold such loans to the GSEs. However, loans drawn under existing revolving home equity lines of credit continued to rise briskly during the second half of the year, an increase likely influenced by a drop in the prime rate, on which the rates on such loans are often based. Growth of consumer loans originated by banks expanded at a solid pace through October but weakened considerably in November and December. However, the amount of such loans held on banks' books generally continued to expand late in the year, as banks had difficulty selling these loans because of ongoing disruptions in securitization markets. Recently, consumer loan growth has also reportedly been buoyed by banks' decisions to build inventory in anticipation of issuance into the Term Asset-Backed Securities Loan Facility (TALF).

In the Senior Loan Officer Opinion Survey on Bank Lending Practices conducted in both October 2008 and January 2009, very large net fractions of banks reported having tightened lending standards for all major loan types. Significant net fractions of respondents also reported a widespread weakening of loan demand. In line with the nearly 33 percent drop (annual rate) in total unused loan commitments reported in fourth-quarter Call Reports, many banks indicated in the January survey that they had cut the size of existing credit lines to businesses and households (figure 14).

Earnings growth at depository institutions slowed markedly in 2008, and profitability as measured by return on assets and return on equity dropped dramatically (figure 15); indeed, commercial banks posted an aggregate loss in the fourth quarter. These developments in part reflected write-downs on securities holdings and increases in loan-loss provisioning in response to deteriorating asset quality. In the fourth quarter, the overall loan delinquency rate at commercial banks increased to more than 4½ percent, its highest level since the early 1990s, and the total charge-off rate rose to more than 1¾ percent, surpassing its peaks in the

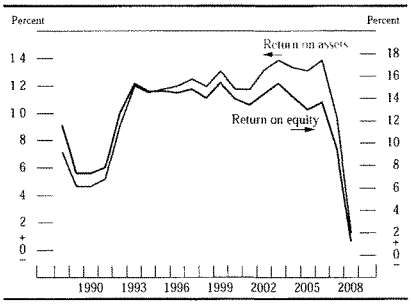
14. Change in unused bank loan commitments to businesses and households, 1990:Q2–2008:Q4




NOTE The data, which are not seasonally adjusted, are quarterly and extend through 2008 Q4.

SOURCE Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report).

15. Commercial bank profitability, 1988–2008




NOTE The data are annual and extend through 2008
SOURCE Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report)

previous two recessions. The ratio of loan-loss reserves to net charge-offs—an indicator of reserve adequacy—dropped below its previous nadir reached in the early 1990s.

Depository institutions' access to funding has improved as a result of the various Federal Reserve liquidity programs and the TLGP, under which eligible firms have issued $169 billion of FDIC-guaranteed bonds to date. In addition, the capital of banking organizations has been boosted by more than $200 billion of preferred stock purchases under the TARP. Still, the recent downward trend in the equity prices of most banks and the elevated level of their CDS spreads suggest that market participants remain concerned about the long-term profitability and potential insolvency of some depository institutions.

The financial turmoil has led to significant changes in the structure of the broad banking industry, with two large investment banks and one large finance company recently converting to bank holding companies to obtain better access to government funding programs; a handful of large insurance firms, motivated partly by their desire to apply for TARP funding, have likewise converted to thrift holding companies. In addition, several failures and mergers of large financial institutions resulted in increased concentrations of industry assets and deposits in 2008.

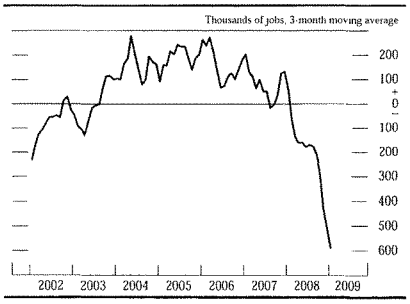
## *DOMESTIC DEVELOPMENTS*

In part reflecting the intensifying deterioration in financial conditions, nearly all major sectors of the U.S. economy recorded sizable declines in activity in late 2008, and the weakness has extended into early 2009. Conditions in the labor market have worsened substantially since early autumn as employment has fallen rapidly, the unemployment rate has climbed, and firms continue to announce more layoffs. Housing remains on a steep downward trend, and both consumer spending and business investment have contracted significantly. In addition, demand for U.S. exports has slumped in response to the decline in foreign economic activity. Meanwhile, overall consumer price inflation turned negative in late 2008 as energy prices tumbled, and core inflation slowed noticeably.

### The Labor Market

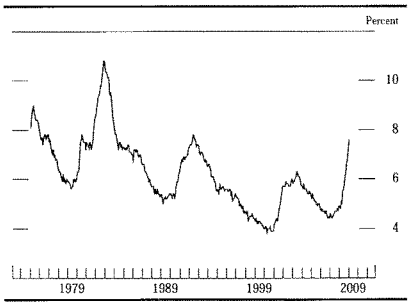
Conditions in the labor market deteriorated throughout 2008, but they worsened markedly in the autumn as job losses accelerated and the unemployment rate jumped. In total, private payrolls fell 3¾ million between the onset of the recession in December 2007 and January 2009, with roughly half of the reduction occurring during the past three months (figure 16). Indeed, since November, private payroll employment has fallen 600,000 per month, compared with average monthly job losses of 340,000 in September and October and 160,000 over the first eight months of 2008. The civilian unemployment rate, which stood at 4.9 percent in December 2007, has marched steadily upward over the past year, and it reached 7.6 percent in January 2009, its highest level since 1992 (figure 17). Moreover, private surveys and news reports indicate that firms plan on continuing to lay off workers in the near term.

16. Net change in private payroll employment, 2002–09



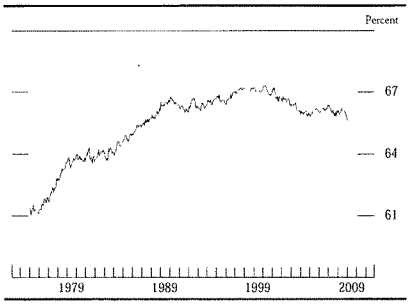

NOTE Nonfarm business sector The data are monthly and extend through January 2009
SOURCE Department of Labor, Bureau of Labor Statistics

17. Civilian unemployment rate, 1975–2009




NOTE The data are monthly and extend through January 2009
SOURCE Department of Labor, Bureau of Labor Statistics

18. Labor force participation rate, 1975–2009




NOTE The data are monthly and extend through January 2009
SOURCE Department of Labor, Bureau of Labor Statistics

Virtually all major industries have experienced considerable job losses recently. Manufacturing employment has fallen nearly 500,000 over the past three months and has dropped more than 1 million since December 2007. Layoffs in truck transportation and wholesale trade, which are closely related to activity in the manufacturing sector, show a similar pattern. The decline in construction employment, which began in early 2007, has also sped up, in part because the ongoing contraction in homebuilding has been accompanied more recently by weakness in nonresidential building. In the service-producing sector, job losses have mounted at retail establishments, providers of financial services, and professional and business services firms, all of which have been adversely affected by the downturn in economic activity. A noticeable exception has been the continued brisk hiring by providers of health services.

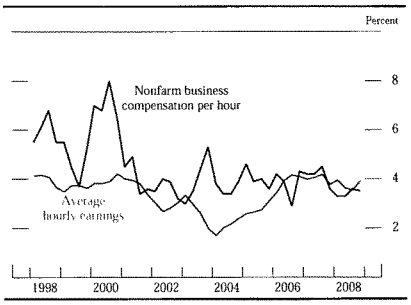
The increase in joblessness has been widespread across demographic, educational, and occupational groups. In January 2009, the unemployment rate for men aged 25 years and older was 3 percentage points above its average level in the fourth quarter of 2007, while the rate for women aged 25 years and older was up 2 percentage points; as typically occurs during recessions, unemployment rates for teenagers and young adults showed even larger increases. Among the major racial and ethnic groups, unemployment rates for blacks and Hispanics have risen somewhat more than those for whites, a differential also typical of periods when labor market conditions weaken. Moreover, the number of workers who are working part time for economic reasons—a group that includes individuals whose hours have been cut back by their employers as well as those who want full-time jobs but are unable to find them—has soared to nearly 8 million, more than 3 million above its level at the start of the recession. The increase in involuntary part-time work has been widespread across industries.

The labor force participation rate, which typically falls during periods of labor market weakness, has decreased of late (figure 18). The decline has probably been damped somewhat by the availability of extended unemployment insurance benefits, which may have encouraged some workers who would have otherwise discontinued their job search efforts to continue looking for work.[4] In addition, the reduction in household wealth over the past couple of years may have prompted some individuals who would have otherwise dropped out of the labor force to remain in, and it may have caused some who would not have entered the labor force to do so.

Broad measures of nominal hourly compensation, which includes both wages and benefits, posted moderate increases in 2008. For example, compensation per hour in the nonfarm business sector—a measure derived from the compensation data in the national income and product accounts (NIPA)—rose 3½ percent in nominal terms in 2008, similar to the increases over the preceding few years (figure 19).

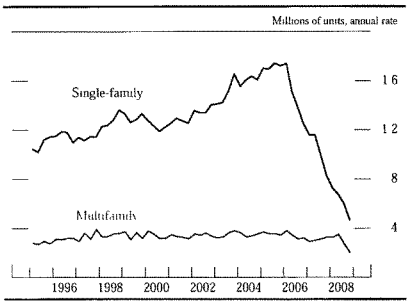
4. Under legislation enacted in June 2008, the Emergency Unemployment Compensation (EUC) program began to provide an additional 13 weeks of benefits to workers who exhaust their regular benefits (typically 26 weeks). In November, the program was expanded to provide additional benefits to workers who exhaust the previously available 13 weeks of EUC benefits (an additional 7 weeks for all eligible individuals and a further 13 weeks for individuals in states with high unemployment rates—defined as a state unemployment rate of 6 percent or above). This expansion, as well as the original EUC program, was scheduled to expire in March 2009, but the American Recovery and Reinvestment Act of 2009 extended it through December 2009; the act also increased payments to recipients of unemployment compensation by $25 per week.

19. Change in hourly compensation and wages, 1998–2008




NOTE The data are quarterly and extend through 2008 Q4 Changes are over four quarters The nonfarm business sector excludes farms government, nonprofit institutions, and households Average hourly earnings refers to production and nonsupervisory workers on private nonfarm payrolls
SOURCE Department of Labor, Bureau of Labor Statistics

20. Private housing starts, 1995–2008




NOTE The data are quarterly and extend through 2008 Q4
SOURCE Department of Commerce, Bureau of the Census

The wage component of hourly compensation also rose moderately in nominal terms in 2008, and because consumer price inflation over the year as a whole was low, much of the gain in nominal wages was reflected in higher real wages. For example, over the four quarters of last year, average hourly earnings, a measure of hourly wages for production and nonsupervisory workers, increased nearly 4 percent in nominal terms—and rose 2 percent after accounting for the rise in the price index for overall personal consumption expenditures (PCE). However, because of sharp cutbacks in hours worked, real average weekly earnings were up just 1 percent Moreover, for many workers, real weekly earnings actually declined: In manufacturing, real average weekly earnings fell 1 percent last year, while in retail trade, this measure of real weekly earnings fell more than 2 percent.

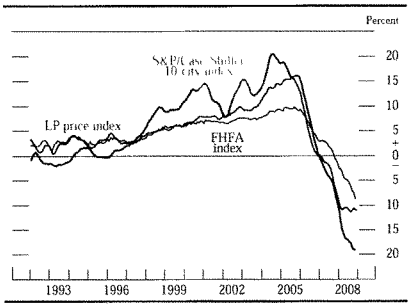
## The Household Sector

### *Residential Investment and Housing Finance*

Housing activity remained on a steep downward trend in the second half of 2008. Home sales and prices slumped further, and homebuilders continued to curtail new construction in response to weak demand and elevated backlogs of unsold new homes. In the single-family sector, new units were started at an average annual rate of just 460,000 units in the fourth quarter of 2008—roughly 75 percent below the quarterly high reached in mid-2005 (figure 20). Starts in the multifamily sector averaged just 200,000 units in the fourth quarter; for 2008 as a whole, multifamily starts totaled 285,000, the lowest level in more than a decade. In all, the decline in residential investment, as measured in the NIPA, subtracted ¾ percentage point from the annual rate of change in GDP in the second half of 2008, about as much as in the first half. The further drop in housing starts and residential building permits in January suggests that housing will continue to exert a substantial drag on the change in real GDP in early 2009.

The further contraction in housing demand in the second half of 2008 partly reflected the bleaker picture for household income and wealth. Potential homebuyers may also have been deterred by concerns about the likelihood of additional declines in house prices and fears of buying into a falling market. And while individuals who qualified for fixed-rate conforming mortgages were able to take advantage of historically low interest rates, many potential homebuyers with blemished credit histories or who were in a position to make only small down payments found it difficult to obtain loans. In the market for new single-family homes, sales fell nearly 30 percent (not at an annual rate) between the second and fourth quarters, which brought the total decline in sales since their peak in mid-2005 to 70 percent. The slippage in sales has continued to hamper builders' efforts to gain control of their inventories. Although the stock of unsold new homes fell considerably in the second half of 2008, it did not fall as much as sales; thus, the months' supply of unsold new homes continued to move up, reaching a level nearly three times that recorded during the first half of the decade. In the market for existing single-family homes, the decline in sales in recent quarters has been less pronounced than for new homes, but this situation could reflect the fact that these sales figures include some transactions

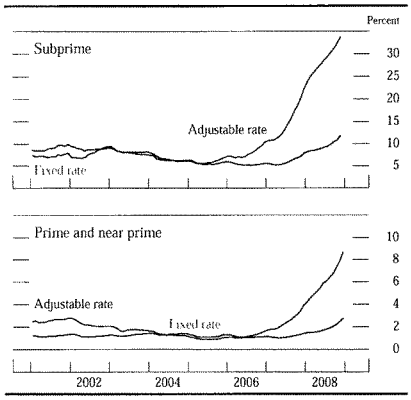
21. Change in prices of existing single-family houses, 1992–2008




NOTE The data are monthly and extend into 2008 Q4; changes are from one year earlier. The LP price index includes purchase transactions only. The FHFA index (formerly calculated by the Office of Federal Housing Enterprise Oversight) also includes purchase transactions only. The S&P/Case-Shiller index reflects all arm's-length sales transactions in the metropolitan areas of Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco, and Washington, D.C.

SOURCE For LP, LoanPerformance, a division of First American CoreLogic; for FHFA, Federal Housing Finance Agency; for S&P/Case-Shiller, Chicago Mercantile Exchange.

22. Mortgage delinquency rates, 2001–08




NOTE The data are monthly and extend through November 2008 for subprime and through December 2008 for prime and near prime. Delinquency rate is the percent of loans 90 days or more past due or in foreclosure.

SOURCE For subprime, First American LoanPerformance. For prime and near prime, Lender Processing Services, Inc.

involving foreclosed homes and other distressed properties, which tend to sell at heavily discounted prices. Existing home sales ended the year more than 30 percent below the highs of a few years earlier.

House prices fell sharply in the second half of 2008, with the latest 12-month readings in major nationwide indexes showing prices of existing homes down between 9 percent and 19 percent (figure 21). One such measure, the LoanPerformance repeat-sales price index, fell 11 percent over the 12 months ending in December and stood 19 percent below its peak in early 2006. Declines in home prices have been especially steep in Arizona, California, Florida, and Nevada. These states, which had experienced some of the largest increases in home prices earlier in the decade, have generally seen the largest increases in delinquency rates and foreclosure actions initiated by lenders.

The drop in home prices is contributing to worsening payment problems among mortgage borrowers. Traditionally, some homeowners have coped with job loss and other life events by refinancing their homes and extracting equity or by selling the properties. However, the considerable declines in housing equity, along with tighter lending standards, mean that even prime loans are more difficult to refinance, and weak housing demand has made selling difficult. As a consequence, borrowers have increasingly fallen behind in their monthly obligations. Indeed, in November 2008, 25 percent of subprime mortgages were seriously delinquent (the latest available data).[5] As of December 2008, 3¾ percent of prime mortgages were seriously delinquent—much lower than the level of serious delinquency for nonprime loans, but still almost twice the level of a year earlier (figure 22).

Foreclosures also have risen appreciably of late. Indeed, available data suggest that more than 2 million homes entered the foreclosure process in 2008, compared with foreclosure starts of 1½ million in 2007 and 1 million or less in each of the preceding four years. As with delinquencies, declining house prices have been a key contributor to the rise in foreclosures. At the same time, rising foreclosures have exacerbated the decline in house prices by increasing the number of heavily discounted properties on the market and thus exerting downward pressure on prices of otherwise comparable occupied homes. Lenders and public policy makers have taken steps to limit the number of avoidable foreclosures by modifying mortgages and putting in place programs such as Hope for Homeowners, established by the Federal Housing Administration (FHA).

In an environment of generally weak housing demand, falling home prices, tighter lending standards, and rising foreclosures, total household mortgage debt appears to have posted an outright decline in 2008—the first in the history of the series, which extends back to

5. A mortgage is defined as seriously delinquent if the borrower is 90 days or more behind in payments or the property is in foreclosure.

the 1950s. In secondary mortgage markets, securitization of mortgages by Fannie Mae and Freddie Mac has fallen in recent months, and gross issuance of GSE-backed MBS has lately just outpaced maturing issues so that levels outstanding have only inched up since the summer. Issuance of Ginnie Mae securities backed by FHA loans has continued to be strong, but the non-agency MBS market remains closed. The FHA has offered an alternative source of mortgage financing for some nonprime and near-prime borrowers, and such lending has picked up lately; still, it has replaced only part of the reduction in credit from other sources, largely because of the FHA's relatively strict lending standards and higher costs.

Interest rates on 30-year fixed-rate conforming mortgages have fallen about 100 basis points, on net, since the November 25 announcement of the Federal Reserve's program to purchase MBS issued by the housing GSEs and Ginnie Mae, and they currently stand at 5 percent (figure 23). However, interest rates for nonconforming jumbo fixed-rate loans have declined by less than those for conforming mortgages in recent months, which has caused the extraordinarily wide spread between the two rates to widen further.[6] The high level of this spread reflects, in part, the absence of functioning securitization markets for jumbo mortgages as well as an increased aversion by banks to making potentially risky loans.

### *Consumer Spending and Household Finance*

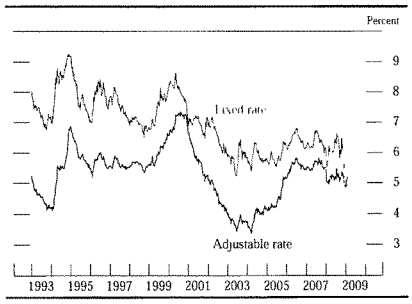
Consumer spending held up reasonably well in the first part of 2008. However, spending slackened noticeably toward the end of the second quarter despite the boost to household income from the tax rebates authorized by the Economic Stimulus Act of 2008, and consumer outlays entered the second half of the year on a downward trajectory. Against a backdrop of sizable job losses, decreases in household net worth, and difficulties in obtaining credit, real PCE declined at an annual rate of more than 3½ percent in the second half of 2008 (figure 24).

The downshift in consumer spending reflected both a sharp pullback in purchases of goods and a marked deceleration in expenditures on services. Outlays for new light motor vehicles (cars, sport utility vehicles, and pickup trucks) were especially hard hit. Indeed, at an annual rate of just 10¼ million units, sales of light vehicles in the fourth quarter were nearly 4 million units below the already reduced pace during the first nine months of the year; they fell further in January 2009 despite relatively low gasoline prices and a substantial increase in sales incentives in recent months.

Real disposable personal income (DPI)—that is, after-tax income adjusted for inflation—rose just 1¼ percent in 2008. Some of the weakness in real DPI reflected softness in aggregate wage and salary income, which fell slightly in real terms. As noted earlier, hourly wages posted a solid increase in real terms last year, but the effect of this increase on aggregate wages and

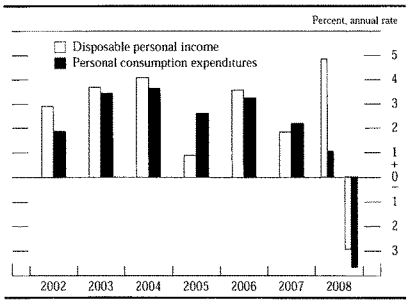
6. Conforming mortgages are those eligible for purchase by Fannie Mae and Freddie Mac; they must be equivalent in risk to a prime mortgage with an 80 percent loan-to-value ratio, and they cannot exceed the conforming loan limit. The conforming loan limit for a first mortgage on a single-family home in the contiguous United States is currently equal to the greater of $417 000 or 115 percent of an area's median house price; it cannot exceed $625 500. Jumbo mortgages are those that exceed the maximum size of a conforming loan; they are typically extended to borrowers with relatively strong credit histories.

23. Mortgage rates, 1993–2009




NOTE The data, which are weekly and extend through February 18, 2009, are contract rates on 30-year mortgages.
SOURCE Federal Home Loan Mortgage Corporation.

24. Change in real income and consumption, 2002–08




SOURCE Department of Commerce, Bureau of Economic Analysis.

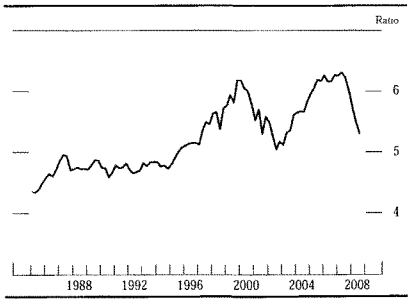
salaries was outweighed by the negative effects of the contraction in employment and the decrease in hours worked by those who retained jobs. Apart from transfer payments, most types of nonwage income performed poorly as well. Measured on a per capita basis, average real after-tax income was essentially unchanged last year, compared with an average increase of nearly 2 percent during the preceding five years.

In addition to the weakness in income, consumer spending has been restrained in recent quarters by a sizable decrease in household net worth (figure 25). This source of restraint on spending likely reflects not only the most recent drops in equity and house prices but also the lagged effects of the appreciable decline in wealth during 2007 and the first half of 2008. The loss of wealth, along with heightened concerns about the prospects for jobs and income, helped push consumer sentiment to very low levels (figure 26). These factors also contributed to a noticeable upturn in the personal saving rate, which rose to nearly 3 percent in the fourth quarter of 2008 after fluctuating between 0 and 1 percent for most of the period since 2005 (figure 27).

Nonmortgage consumer debt outstanding appears to have fallen, on net, in the second half of 2008 after having increased at an annual rate of 4 percent in the first half. Part of the drop in borrowing was likely due to weaker demand for loans, but the available evidence also suggests that lenders tightened the supply significantly. Indeed, results from the Senior Loan Officer Opinion Survey released in October 2008 and January 2009 revealed that many banks tightened standards and terms for consumer loans, actions that included lowering credit limits on existing credit card accounts. Lenders also reportedly continued to tighten underwriting standards on non-government-guaranteed student loans, and some major providers of these loans exited the market.

Part of the tightening of lending standards and terms no doubt reflects lenders' concerns about the credit quality of households. Indeed, the performance of consumer loans has continued to worsen in recent months, albeit less starkly than that of mortgages. Delinquency rates for most types of consumer lending—credit cards, auto loans, and nonrevolving loans—rose significantly, on net, over the course of 2008, and most such rates now stand at or above the levels seen during the 2001 recession (figure 28). Household bankruptcy rates also increased sharply in 2008.

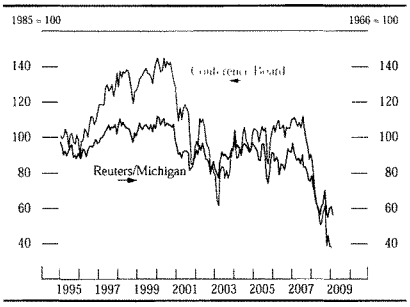
25. Wealth-to-income ratio, 1985–2008




NOTE The data are quarterly and extend through 2008 Q3 The wealth-to-income ratio is the ratio of household net worth to disposable personal income

SOURCE For net worth, Federal Reserve Board, flow of funds data, for income, Department of Commerce, Bureau of Economic Analysis

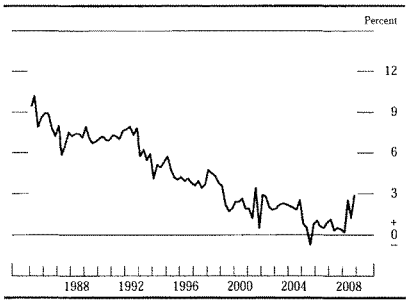
26. Consumer sentiment, 1995–2009




NOTE The Conference Board data are monthly and extend through January 2009 The Reuters/Michigan data are monthly and extend through a preliminary estimate for February 2009

SOURCE The Conference Board and Reuters/University of Michigan Surveys of Consumers

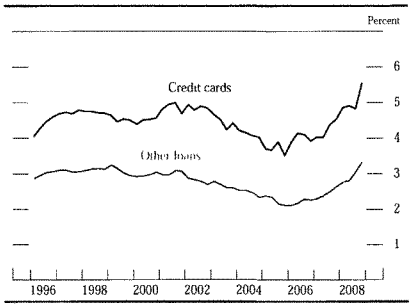
27. Personal saving rate, 1985–2008




NOTE The data are quarterly and extend through 2008.Q4

SOURCE Department of Commerce, Bureau of Economic Analysis

28. Delinquency rates on consumer loans, 1996–2008




NOTE The data are quarterly and extend through 2008 Q4. Delinquency rate is the percent of loans 30 days or more past due.
SOURCE Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report).

The pullback in consumer credit also likely reflects, in part, the difficulties in the market for asset-backed securities. Until the first half of 2008, a substantial fraction of consumer credit had been funded with ABS, but since the third quarter, issuance of credit card, automobile, and student loan ABS has slowed to a trickle. As noted earlier, to facilitate renewed issuance of consumer and small business ABS and thus support economic activity, the Federal Reserve announced in November plans for the Term Asset-Backed Securities Loan Facility, which will begin operations in the coming weeks.[7] Spreads on AAA-rated ABS rose through most of last year but have declined lately, reportedly in anticipation of the opening of the TALF.

Against this backdrop, interest rates on auto loans generally rose somewhat during the second half of 2008, and those on most other types of consumer loans were little changed, despite a substantial decrease in rates on comparable-maturity Treasury securities. Although some consumer interest rates appear to have fallen slightly in early 2009, their spreads to Treasury rates remain quite elevated.

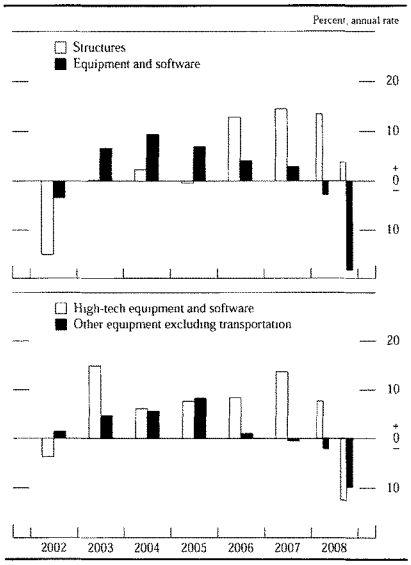
## The Business Sector

### *Fixed Investment*

After having posted small gains in the first half of 2008, real business fixed investment edged down in the third quarter and fell sharply in the fourth quarter (figure 29). The retrenchment in investment reflected both a steep drop in outlays on equipment and software (E&S) and a sharp deceleration in spending on nonresidential construction after 2½ years of robust gains. Investment demand appears to have been depressed by the downturn in sales, production, and profitability as well as by the reduced availability and higher cost of credit from securities markets, banks, and other lenders.

Real spending for E&S fell at annual rates of 7½ percent in the third quarter and 28 percent in the fourth quarter. Business outlays on motor vehicles, which had fallen sharply in the first half of the year, continued to plunge in the second half. Outlays for other major components of E&S also recorded sizable declines. Real investment in information technology equipment—which had risen moderately in the first half of the year—fell at a 12½ percent annual rate, on average, in the second half as business demand for computers, software, and communications equipment dropped appreciably. Real spending on equipment other than information technology and transportation, which

29. Change in real business fixed investment, 2002–08




NOTE High-tech equipment consists of computers and peripheral equipment and communications equipment.
SOURCE Department of Commerce, Bureau of Economic Analysis.

7. A description of the TALF is in the appendix.

had been moving essentially sideways since the end of 2005, held up through the third quarter. However, it fell at an annual rate of about 20 percent in the fourth quarter, and the slow pace of orders lately, along with the downbeat tone in recent surveys of business conditions, points to further declines in this broad category of spending in early 2009.

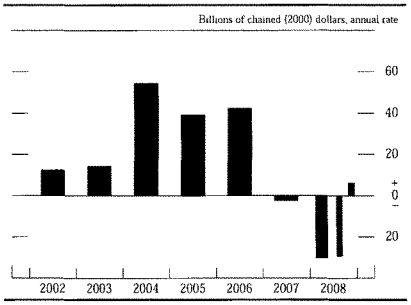
On net, real outlays for nonresidential construction posted a small increase in the second half of 2008. However, gains were concentrated in energy-related sectors—drilling and mining structures, petroleum refineries, and transmission and distribution facilities—and likely reflected the earlier run-up in the price of crude oil. Outside the energy-related sectors, spending turned down in the second half of last year as construction of office buildings softened and spending on nonoffice commercial buildings (a category that includes retail, wholesale, and some warehouse space) fell sharply. The decline was related to the rise in vacancy rates over the past few quarters, which was driven, in part, by the weakening in aggregate output and employment. In addition, recent reports from bank lending officers suggest that financing for new construction projects has become even more difficult to obtain.

### *Inventory Investment*

One hallmark of the economic landscape over the past year has been the prompt response of producers to the slowing in final sales. For much of 2008, the production adjustments resulted in a rapid pace of inventory liquidation and were sufficient to prevent the emergence of widespread stock imbalances (figure 30). In the fourth quarter, however, the precipitous drop in final demand left many firms holding inventories in excess of desired levels—a view expressed by respondents to a variety of business surveys at the turn of the year. Accordingly, available data suggest that producers continued to pare back output in January 2009.

The inventory overhang at year-end was especially acute in the motor vehicle sector. Although automakers slashed production during the fourth quarter, the collapse in sales last autumn pushed up dealers' stocks, and the days' supply of cars and light trucks soared to nearly 100 days—well above industry norms. In response, motor vehicle manufacturers instituted even larger cuts in production in early 2009. These cuts should help ease the pressure on dealers' stocks, though further progress will require continued restraint on production, a meaningful pickup in sales, or both.

30. Change in real business inventories, 2002–08



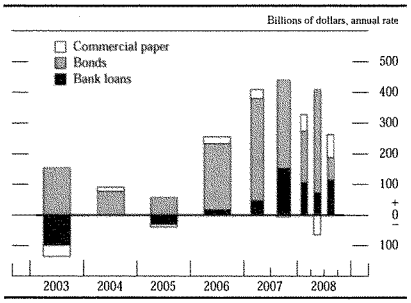

SOURCE Department of Commerce, Bureau of Economic Analysis

### *Corporate Profits and Business Finance*

Operating earnings per share for S&P 500 firms fell an estimated 17 percent in 2008. Losses were especially pronounced for financial firms. In the nonfinancial sector, earnings at firms other than oil and gas companies generally slowed over the course of 2008 and declined outright in the fourth quarter. In addition, in light of the deterioration in the economy, analysts significantly marked down their projections for earnings in 2009.

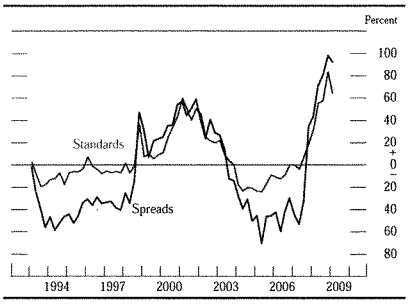
Borrowing by domestic nonfinancial businesses—primarily through the corporate bond market, the commercial paper market, and bank loans—slowed markedly in the second half of 2008 (figure 31). The deceleration reflected not only a reduced desire of businesses to borrow and invest in response to the worsening economic outlook but also a reduced willingness of potential lenders to provide funding for risky projects. In the corporate bond market, issuance of investment-grade securities by nonfinancial firms was solid throughout the year; in contrast, speculative-grade issuance has been scant in recent months. After moving up in the first half of the year, the cost of longer-term financing rose further as interest rates on both investment- and speculative-grade corporate bonds soared in the fall. While corporate bond rates were climbing, Treasury yields dropped, pushing interest rate spreads on corporate bonds well above previous record highs. The increases in spreads appeared to derive from both the anticipation of an increase in defaults and a further reduction in investors' willingness to take risk. In the commercial paper market, short-term borrowing by highly rated nonfinancial firms has increased since the summer; the rise reflects importantly the Federal Reserve programs supporting issuance by stronger

31. Selected components of net financing for nonfinancial corporate businesses, 2003–08




NOTE: The data for the components except bonds are seasonally adjusted.
SOURCE: Federal Reserve Board, flow of funds data.

32. Net percentage of domestic banks tightening standards and increasing spreads on commercial and industrial loans to large and medium-sized borrowers, 1993–2009




NOTE: The data are drawn from a survey generally conducted four times per year; the last observation is from the January 2009 survey, which covers 2008:Q4. Net percentage is the percentage of banks reporting a tightening of standards or an increase in spreads less the percentage reporting an easing or a decrease. Spreads are measured as the loan rate less the bank's cost of funds. The definition for firm size suggested for, and generally used by, survey respondents is that large and medium-sized firms have annual sales of $50 million or more.
SOURCE: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

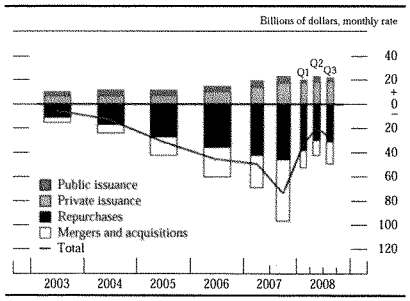
firms. Indeed, rates on highly rated paper with maturities of less than 30 days have averaged around 20 basis points since late November, compared with nearly 200 basis points in September and October. Rates on lower-grade nonfinancial paper have also decreased in recent months, but their spreads to highly rated paper remain elevated by historical standards.

Bank lending to businesses expanded in September and October as firms reportedly drew on existing lines of credit. More recently, however, loans to commercial and industrial borrowers have registered significant declines. In addition, the growth of commercial real estate loans—which are often used to finance construction and land development—slowed substantially in the second half of the year. Given the deteriorating economic outlook, tighter credit standards, and businesses' decisions to scale back new investment, both C&I and CRE lending seem likely to fall further in the first part of 2009 (figure 32).

In the equity market, initial offerings by nonfinancial corporations were very sparse through the second half of 2008, and seasoned offerings (excluding firms in the energy sector) were also weak (figure 33). Equity retirements—which often occur as a result of share repurchases that are associated with cash-financed mergers—continued to outpace the combined amount of private and public issuance, a development due, in part, to the completion of a few large mergers. However, share repurchases are estimated to have moderated a bit in recent months, and announcements of future cash-financed mergers have slowed significantly, likely because of the weaker economic outlook and tighter lending conditions.

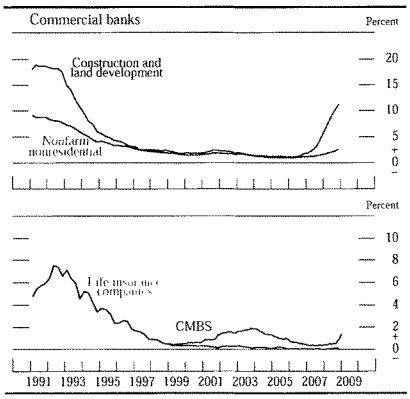
The credit quality of nonfinancial firms deteriorated in the second half of the year. The aggregate ratio of debt to assets climbed further, and the aggregate ratio of liquid assets to total assets declined notably. Ratings downgrades on nonfinancial corporate bonds picked up and outpaced upgrades, and the share of corporate bonds rated B3 or below by Moody's increased to about

33. Components of net equity issuance, 2003–08




NOTE: Net equity issuance is the difference between equity issued by domestic companies in public or private markets and equity retired through share repurchases, domestic cash-financed mergers, or foreign takeovers of U.S. firms. Equity issuance includes funds invested by private equity partnerships and stock option proceeds.
SOURCE: Thomson Financial, Investment Benchmark Report; Money Tree Report by PricewaterhouseCoopers, National Venture Capital Association, and Venture Economics.

34. Delinquency rates on commercial real estate loans, 1991–2009




NOTE The data for commercial banks and life insurance companies are quarterly and extend through 2008 Q4 The data for commercial mortgage-backed securities (CMBS) are monthly and extend through January 2009 The delinquency rates for commercial banks and CMBS are the percent of loans 30 days or more past due or not accruing interest The delinquency rate for life insurance companies is the percent of loans 60 days or more past due or not accruing interest

SOURCE For commercial banks, Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report), for life insurance companies, American Council of Life Insurers, for CMBS, Citigroup

6½ percent. Delinquency rates on C&I loans increased noticeably in the fourth quarter, and delinquency rates on CRE loans rose further, mainly because of continued rapid weakening in the performance of residential and commercial construction loans (figure 34).

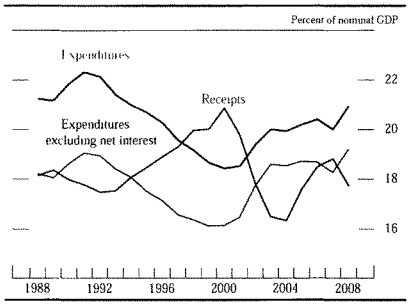
## The Government Sector

### *Federal Government*

The deficit in the federal unified budget is in the midst of a massive widening. Mainly reflecting the deceleration in economic activity and the provisions of the Economic Stimulus Act of 2008, the deficit rose to $455 billion in fiscal year 2008, nearly $300 billion higher than in fiscal 2007 and equal to more than 3 percent of nominal GDP. So far in fiscal 2009, the deficit has increased substantially further, mostly because of outlays under the Troubled Asset Relief Program and the effects of the weak economy on revenues and spending.[8] In January, the Congressional

8. In the Monthly Treasury Statements, equity purchases under the TARP and the GSE conservatorship are treated on a cash-flow basis, which means that the outlays are recorded as they occur; a flow of receipts will be recorded in future years to reflect any dividends on the shares of equity and the proceeds from the eventual sale of the shares. In contrast, the Congressional Budget Office (CBO) treats these transactions on an accrual basis and thus records outlays as the net present value cost of the equity purchases, rather than the entire amount that is disbursed; under the CBO approach, there is no offsetting flow of receipts in future years. According to the Treasury, the unified budget deficit for the first four months of fiscal 2009 totaled $569 billion; under the CBO approach, the year-to-date deficit would be $361 billion.

35. Federal receipts and expenditures, 1988–2008




NOTE The receipts and expenditures data are on a unified-budget basis and are for fiscal years (October through September), gross domestic product (GDP) is for the four quarters ending in Q3

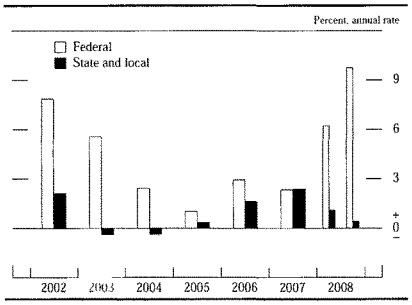
SOURCE Office of Management and Budget

Budget Office estimated that the deficit for fiscal 2009 as a whole would total more than $1 trillion under the spending and taxation policies in place at that time, a figure that excludes the budgetary impact of the American Recovery and Reinvestment Act of 2009.

Federal receipts fell nearly 2 percent in nominal terms in fiscal 2008 and stood at 17¾ percent of nominal GDP; they dropped further during the first four months of fiscal 2009 (figure 35). The decline has been most pronounced in corporate receipts, which have fallen at double-digit rates as corporate profits have dropped and as firms have presumably adjusted payments to take advantage of the bonus depreciation provisions contained in the Economic Stimulus Act. Excluding the rebates provided to most households under the act, individual income tax receipts rose moderately in fiscal 2008. However, so far in fiscal 2009, individual receipts have been running below year-earlier levels, likely because of the weakness in nominal personal income and reduced capital gains realizations.

Excluding financial transactions, nominal federal outlays increased 8 percent in fiscal 2008 after having risen just 3 percent in fiscal 2007. Defense outlays rose 12 percent in fiscal 2008 as the rapid run-up in budget

36. Change in real government expenditures on consumption and investment, 2002–08




SOURCE Department of Commerce, Bureau of Economic Analysis

authority over the past three years continued to bolster spending; increases in defense funding in recent years have been substantial not only for operations in Iraq and Afghanistan but also for activities not directly related to those conflicts. Federal spending also rose sharply in fiscal 2008 for programs that provide support to lower-income households. So far in fiscal 2009, federal outlays for defense and low-income support programs have continued to rise rapidly. Also, spending for Medicare has picked up lately, and outlays for Social Security have been lifted by the large cost-of-living adjustment that took place in January. As for the part of federal spending that is a direct component of GDP, real federal expenditures for consumption and gross investment rose at an annual rate of 10 percent, on average, in the second half of calendar year 2008, mostly because of the sizable increase in defense spending (figure 36).

### *State and Local Government*

Aggregate real expenditures on consumption and gross investment by state and local governments were little changed, on net, in the second half of 2008 after posting a small increase in the first half. In part reflecting the mounting pressures on the sector's budgets, state and local employment has been about flat since mid-2008, while real construction spending has essentially moved sideways.

The financial positions of most states—with the exceptions of Arizona, California, Michigan, and a few others—were fairly solid at the end of fiscal year 2008.[9] However, so far in fiscal 2009, revenues have been running significantly below expected levels because of the softness in personal and corporate incomes and the weakness in retail sales. States' initial plans to address the widening budget gaps have included cuts in spending on education and other programs, hiring freezes and furloughs, and some tapping of rainy day funds; in coming quarters, however, the dominant influence on state budgets will be the infusion of grants-in-aid under the 2009 federal stimulus package, which will help cushion the effects of the economic downturn on states' budgets. At the local level, property tax receipts continued to be propped up in 2008 by the lagged effects of the dramatic increases in house prices over the first half of the decade.[10] Nevertheless, the sharp fall in house prices over the past two years is likely to put substantial downward pressure on local revenues before long. Moreover, many state and local governments will need to set aside money in coming years to rebuild their employee pension funds after the losses experienced in 2008 and to fund their ongoing obligations to provide health care to their retired employees.

## The External Sector

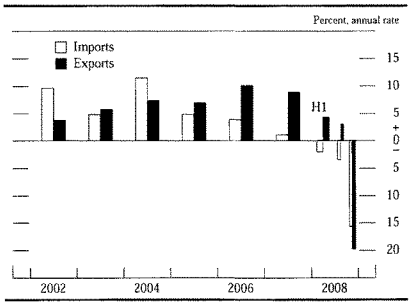
In contrast to the first half of 2008—when robust exports provided some offset to the softness in domestic demand—the external sector provided little support to economic activity in the second half of the year. After decelerating in the third quarter, real exports declined sharply in the fourth quarter, as economic activity abroad contracted. Real imports, which had been declining earlier in 2008, also dropped considerably in the fourth quarter, dragged down by deteriorating U.S. demand (figure 37). The declines in trade flows in late 2008 were widespread across major types of products and U.S. trading partners. In addition, exports were depressed by production disruptions at Boeing.

The U.S. trade deficit narrowed considerably at the end of 2008, which largely reflected a sharp decline in the price of imported oil. The trade deficit was $555 billion at an annual rate in the fourth quarter of 2008, or about 4 percent of nominal GDP, compared with a deficit of 5 percent of nominal GDP a year earlier (figure 38).

9. State government fiscal years end on June 30 in all but four states.

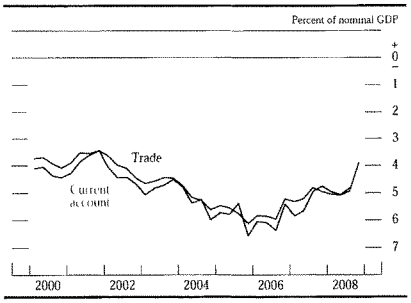
10. The lag between changes in house prices and changes in property tax revenue likely occurs because many localities are subject to state limits on the annual increases in total property tax payments and property value assessments. Thus, increases in market prices for houses may not be reflected in property tax bills until well after the fact.

37. Change in real imports and exports of goods and services, 2002–08



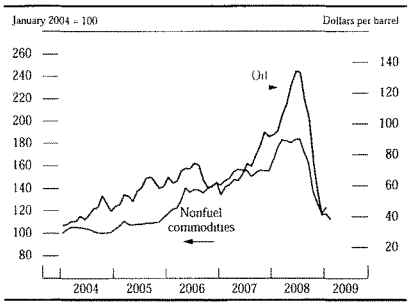

SOURCE Department of Commerce, Bureau of Economic Analysis

38. U.S. trade and current account balances, 2000–08




NOTE The data are quarterly For the trade account, the data extend through 2008 Q4, for the current account, they extend through 2008 Q3
SOURCE Department of Commerce, Bureau of Economic Analysis

39. Prices of oil and nonfuel commodities, 2004–09




NOTE The data are monthly The oil price is the spot price of West Texas intermediate crude oil, and the last observation is the average for February 1–18, 2009 The price of nonfuel commodities is an index of 45 primary-commodity prices and extends through January 2009
SOURCE For oil, the Commodity Research Bureau, for nonfuel commodities, International Monetary Fund

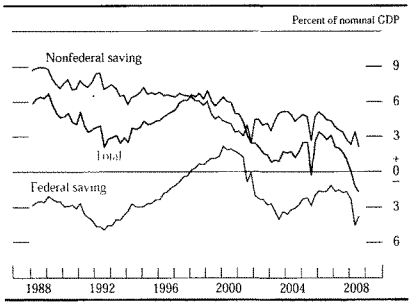
The price of crude oil in world markets was extremely volatile in 2008. After ending 2007 at about $95 per barrel, the spot price of West Texas intermediate (WTI) crude oil surged to more than $145 by mid-July amid both surprisingly robust oil demand, especially from emerging market economies, and continued restraint in near-term supply (figure 39). Since mid-July, the financial market turmoil and the resulting sharp downturn in global economic activity have dragged down oil demand. Despite attempts by OPEC to rein in production, the rapid drop in demand and concerns about future prospects for the global economy led to a collapse in oil prices. The spot price of WTI fell about 75 percent from its peak to near $40 per barrel in January of this year. Far-dated futures prices for crude oil have fallen somewhat less, which likely reflects the view that OPEC actions will eventually reduce supply and that global oil demand will rebound in the medium term.

Import prices rose rapidly in the first half of 2008, but the increase was reversed in the second half. That pattern primarily reflected the sharp swing in oil prices, but it was also influenced by a marked slowing in non-oil import price inflation from its rapid pace in the first half of the year. Even excluding oil, prices of imported goods declined in the fourth quarter of 2008, driven by both the sharp fall in non-oil commodity prices and the appreciation of the dollar that occurred in the latter half of the year.

## National Saving

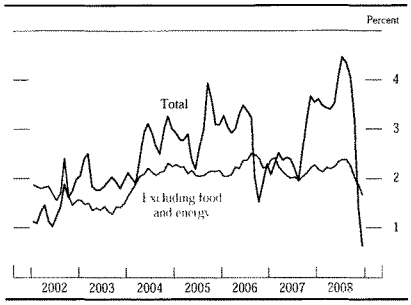
Total net national saving—that is, the saving of households, businesses, and governments excluding depreciation charges—fell further in 2008 (figure 40). After having ticked up to 3 percent of nominal GDP in 2006, net national saving dropped steadily over the subsequent two years as the federal budget deficit widened, the fiscal positions of state and local governments deteriorated, and private saving remained low; in the third quarter of 2008, net national saving stood at negative 1¾ percent of GDP. National saving will likely remain low this year in light of the weak economy and the recently enacted federal fiscal stimulus package. Nonetheless, if not boosted over the longer run, persistent low levels of national saving will likely be associated

40. Net saving, 1988–2008




NOTE The data are quarterly and extend through 2008 Q3. Nonfederal saving is the sum of personal and net business saving and the net saving of state and local governments.
SOURCE Department of Commerce, Bureau of Economic Analysis.

41. Change in the chain-type price index for personal consumption expenditures, 2002–08




NOTE The data are monthly and extend through December 2008. Changes are from one year earlier.
SOURCE Department of Commerce, Bureau of Economic Analysis.

with both low rates of capital formation and heavy borrowing from abroad, which would limit the rise in the standard of living of U.S. residents over time and hamper the ability of the nation to meet the retirement needs of an aging population.

## Prices and Labor Productivity

### *Prices*

Although inflation pressures were elevated during the first half of 2008 and into the summer, they diminished appreciably toward year-end as prices of energy and other commodities dropped and the degree of slack in the economy increased. The chain-type price index for total personal consumption expenditures fell at an annual rate of 5½ percent in the fourth quarter after rising rapidly over the first three quarters of the year. The core PCE price index—which excludes food and energy items—rose at an annual rate of just ½ percent in the fourth quarter after increases of 2¼ percent, on average, over the first three quarters of the year. Over 2008 as a whole, core PCE prices increased 1¾ percent (figure 41). Data for PCE prices in January 2009 are not yet available, but information from the consumer price index (CPI) and other sources suggests that both the total and core PCE price indexes posted modest increases in that month.

Since peaking in July, consumer energy prices have fallen dramatically, with most of the decline coming during the last three months of 2008. Largely reflecting the drop in crude oil prices, the price of gasoline fell from around $4 per gallon, on average, in July to less than $2 per gallon in December; in mid-February, it was in the neighborhood of $2 per gallon. Prices of natural gas, which typically move roughly in line with crude oil prices over periods of several months, also fell sharply in the second half of 2008 after a substantial run-up in the first half of the year. Consumer prices for electricity continued to move up through the end of the year—likely because of higher prices earlier in the year for fossil fuel inputs to electricity generation—though increases appear to have slowed in early 2009.

In contrast, consumer food prices continued to rise rapidly into the autumn. Increases were substantial both for food consumed at home and for purchased meals and beverages, which typically are influenced more by labor and other business costs than by farm prices. Since November, however, increases in consumer food prices have been quite modest. Farm prices, which had soared between 2006 and mid-2008 as a consequence of strong world demand and the increased use of corn for the production of ethanol, fell sharply in the second half of last year as prospects for domestic and foreign demand for food weakened and the demand for ethanol eased. Typically, changes in farm prices start to show through fairly quickly to consumer food prices, and the small increases in the CPI for food in the past couple of months suggest that a noticeable moderation in consumer food price inflation is under way.

The slowdown in core inflation in late 2008 was widespread, although it was particularly steep for motor vehicles, apparel, and other consumer goods that were heavily discounted by retailers in an environment of weak demand and excess inventories. In addition, the cost pressures that seemed to be boosting core inflation

earlier in the year ebbed as pass-throughs of the previous large increases in the prices of energy and materials ran their course and the effects of recent declines in these prices started to show through to consumer prices. The strengthening in the exchange value of the dollar and the deceleration of import prices also helped ease the upward pressure on core inflation.

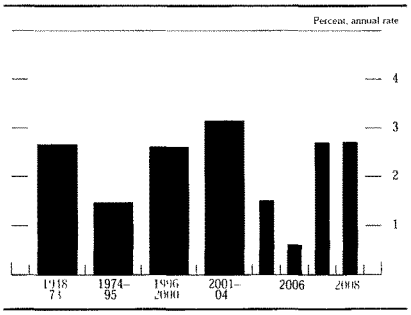
Survey-based measures of near-term inflation expectations have receded as actual inflation has come down, while indicators of longer-term inflation expectations have been steadier. According to the Reuters/University of Michigan Surveys of Consumers, median one-year inflation expectations, which had moved above 5 percent last spring and early summer, fell throughout the second half of last year; since December, they have fluctuated around 2 percent. As for longer-term inflation expectations, the Reuters/University of Michigan survey measure of median 5- to 10-year inflation expectations was about 3 percent in January and early February of this year, similar to the readings during 2007 and the early part of 2008.

### *Productivity and Unit Labor Costs*

Labor productivity has held up surprisingly well in the past year. Although productivity growth has often stalled during previous recessions, output per hour in the nonfarm business sector rose 2¾ percent over the course of 2008, the same rate as in 2007 (figure 42). The continued rise in productivity during the second half of last year, at a time when output was contracting, likely reflects the aggressive downsizing undertaken by firms in response to their worsening sales prospects. Moreover, although estimates of the underlying pace of productivity growth are quite uncertain, the buoyancy of productivity in recent quarters suggests that the fundamental forces supporting a solid underlying trend—for example, the rapid pace of technological change and the ongoing efforts by firms to use information technology to improve the efficiency of their operations—remain in place.

Reflecting the solid gain in labor productivity, along with the subdued increase in nominal hourly compensation noted earlier, unit labor costs in the nonfarm business sector rose just ¾ percent in 2008. The increase in unit labor costs was about the same as that recorded in 2007.

42. Change in output per hour, 1948–2008



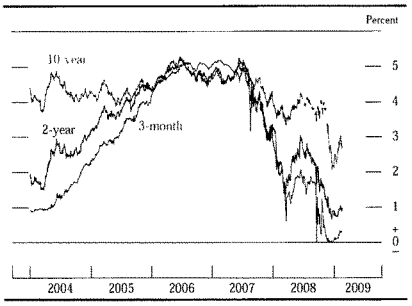

NOTE Nonfarm business sector. Change for each multiyear period is measured to the fourth quarter of the final year of the period from the fourth quarter of the year immediately preceding the period.
SOURCE Department of Labor, Bureau of Labor Statistics.

## Monetary Policy Expectations and Treasury Rates

The current target range for the federal funds rate, 0 to ¼ percent, is substantially below the level that investors expected at the end of June 2008; policy expectations were steadily revised downward over the second half of the year as the financial and economic outlook worsened. Toward the end of the year, readings on interest rate expectations from money market futures and options were complicated by persistent trading of federal funds below the target rate, which resulted from the large increase in reserve balances accompanying the expansion of the Federal Reserve's liquidity programs. Nevertheless, investors clearly anticipated that the federal funds rate would remain low for quite some time amid increasing concerns about the health of financial institutions, weakness in the real economy, and a moderation in inflation pressures. Futures quotes currently suggest that investors expect the federal funds rate to remain around its current level throughout the first half of this year and then to rise gradually through the end of 2010. However, uncertainty about the size of term premiums and potential distortions created by the zero lower bound for the federal funds rate make it difficult to obtain from futures prices a definitive reading on the policy expectations of market participants. Options prices suggested that investor uncertainty about the future path for policy was increasing considerably through October, as strains in financial markets intensified, but these measures of uncertainty have subsequently trended downward.

As the economic outlook worsened during the second half of the year and inflation pressures ebbed, yields on longer-maturity Treasury securities declined substantially (figure 43). In addition, the generally

43. Interest rates on selected Treasury securities, 2004–09




NOTE The data are daily and extend through February 18, 2009
SOURCE Department of the Treasury

negative market sentiment and speculation that the Federal Reserve might begin purchasing large quantities of longer-maturity Treasury securities contributed at times to downward pressure on Treasury yields. Offsetting these factors to some degree were market expectations that the Treasury's issuance of long-term debt, which rose notably over the course of 2008, would pick up further in 2009. On net, yields on 2- and 10-year notes fell about 200 and 140 basis points, respectively, during the second half of 2008.

In contrast to yields on their nominal counterparts, yields on Treasury inflation-protected securities (TIPS) rose over the second half of 2008, which resulted in a noticeable reduction in measured inflation compensation—the difference between comparable-maturity nominal and TIPS yields. Some of this reduction was reversed in the early part of 2009. Inferences about inflation expectations based on TIPS yields have been difficult to make recently because these yields appear to have been affected to a degree by movements in liquidity premiums and because special factors have buffeted yields on nominal Treasury issues.

## Federal Borrowing

Federal debt soared in the second half of 2008. The more than $1 trillion of Treasury borrowing since the summer reflects importantly the need to finance the Treasury's purchases of agency MBS and equity; the TARP, under which the Treasury has purchased preferred shares in a number of financial institutions; and the Supplementary Financing Program, under which the Treasury has increased deposits at the Federal Reserve to help fund the expansion of the Federal Reserve's balance sheet. The ratio of federal debt held by the public to nominal GDP surged to almost 45 percent at the end of calendar year 2008 and seems certain to increase again in the first part of 2009, as borrowing is expected to remain strong with the weak economy and budgetary initiatives.

Despite the heavy issuance of Treasury securities in the second half of the year, the rapid growth of federally guaranteed debt issued by banking institutions under the Temporary Liquidity Guarantee Program, and continued issuance of GSE securities, demand at most Treasury auctions was solid, as investors sought the safety of Treasury securities. Demand for Treasury bills was extremely strong, and yields in secondary markets sometimes fell close to zero (and even below zero at times), even as the supply of bills increased markedly. Foreign custody holdings of Treasury securities at the Federal Reserve Bank of New York grew nearly 40 percent over 2008, although the proportion of nominal coupon securities purchased at auctions by foreign investors generally remained in the 10 percent to 30 percent range observed over the past several years.

## State and Local Government Borrowing

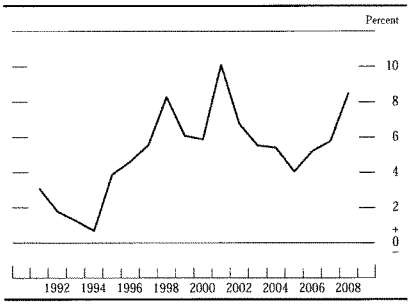
On net, borrowing by state and local governments in the market for municipal securities was subdued in the second half of 2008. The issuance of short-term municipal debt was robust, boosted in part by the need to fund operating expenditures at a time of weak revenues. However, issuance of long-term debt, which is generally used to fund capital spending projects or to refund existing long-term debt, slowed significantly. Interest rates on long-term debt climbed sharply across the maturity spectrum in the second half of 2008 in the face of considerable strain on the budgets of many state and local governments and sharp deteriorations in market functioning. More recently, however, municipal bond rates have dropped markedly, in part because market participants appeared to view the federal stimulus package as likely to improve the financial condition of state and local governments.

## Monetary Aggregates

The M2 monetary aggregate increased at a 10 percent annual rate during the second half of 2008 and 8½ percent for the year as a whole (figure 44).[11]

11. M2 consists of (1) currency outside the U.S. Treasury, Federal Reserve Banks, and the vaults of depository institutions; (2) traveler's

44. M2 growth rate, 1991–2008




NOTE The data extend through 2008 and are annual on a fourth-quarter over fourth-quarter basis. M2 consists of currency, traveler's checks, demand deposits, other checkable deposits, savings deposits (including money market deposit accounts), small-denomination time deposits, and balances in retail money market funds.

SOURCE Federal Reserve Board, Statistical Release H.6, "Money Stock Measures."

The rapid growth reflected in part a marked decrease in some market interest rates relative to the rates offered on M2 assets, as well as increased demand for safe and liquid assets during the financial turmoil. During the second half of the year, the significant slowdown in the growth of retail money market mutual funds was offset by a rapid increase in small time deposits, as banks bid aggressively for these deposits to buttress their funding. The currency component of the money stock also increased briskly, an indication of solid demand for U.S. banknotes from both foreign and domestic sources. Flows into demand deposits were significant after the introduction of the Temporary Liquidity Guarantee Program, which apparently drew funds out of other money market instruments.

The monetary base—essentially the sum of currency in the hands of the public and bank reserves—has increased rapidly in recent months, primarily owing to heavy use of the Federal Reserve's liquidity programs. Credit extended through these programs caused the balance sheet of the Federal Reserve to expand considerably over the course of 2008, and this growth was financed largely by the creation of reserve balances. The increase in reserve balances almost entirely represented an increase in excess reserves rather than an increase in required reserves. In early 2009, the size of the balance sheet has decreased somewhat, which reflects a runoff in credit extended through the Commercial Paper Funding Facility and a decrease in draws on liquidity swap lines with foreign central banks.

checks of nonbank issuers; (3) demand deposits at commercial banks (excluding those amounts held by depository institutions, the U.S. government, and foreign banks and official institutions) less cash items in the process of collection and Federal Reserve float; (4) other checkable deposits (negotiable order of withdrawal, or NOW, accounts and automatic transfer service accounts at depository institutions, credit union share draft accounts, and demand deposits at thrift institutions); (5) savings deposits (including money market deposit accounts); (6) small-denomination time deposits (time deposits in amounts of less than $100,000) less individual retirement account (IRA) and Keogh balances at depository institutions; and (7) balances in retail money market mutual funds less IRA and Keogh balances at money market mutual funds.

## *INTERNATIONAL DEVELOPMENTS*

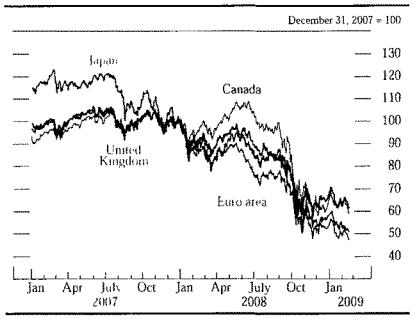
### International Financial Markets

Although foreign banks continued to report losses over the summer and funding conditions remained strained, global financial markets were relatively calm in July and August of 2008. This situation changed abruptly in September, as global interbank and other funding markets seized up and lending came to a near standstill. These developments were followed by the collapse of several prominent foreign financial institutions. In late September, the banks Bradford and Bingley, Fortis, and Dexia were partially or fully nationalized, and Hypo Real Estate Holding AG received a large capital injection from the German government.

The deepening of the crisis led many foreign governments to announce unprecedented measures to restore credit market functioning, including large-scale capital injections into the banking system, expansions of deposit insurance programs, and guarantees of some forms of bank debt. Most major central banks cut policy rates sharply as the financial crisis led to a dramatic deterioration in the outlook for economic activity and inflation; in October, coordinated policy rate cuts were made by the Federal Reserve and five other central banks. To address global dollar funding pressures, the Federal Reserve greatly expanded its program of liquidity swaps with foreign central banks by increasing the dollar amounts extended as well as the number of countries with which it has swap agreements. (The central banks with swap arrangements are discussed in the appendix.) These concerted global measures seem to have soothed conditions and had restored some measure of stability to markets by the end of the year, although credit markets abroad are still impaired.

Stock markets in the advanced foreign economies were nearly flat over July and August of 2008 but fell sharply beginning in late September; market volatility rose to record levels with the deepening of the financial crisis. On net, broad equity price indexes in Europe,

45. Equity indexes in selected advanced foreign economies, 2007–09

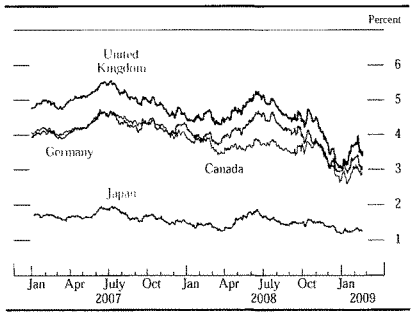



NOTE The data are daily The last observation for each series is February 18, 2009 Because the Tokyo Exchange was closed on December 31, 2007, the Japan index is scaled so that the December 28, 2007, closing value equals 100

SOURCE For euro area, Dow Jones Euro STOXX Index, for Canada, Toronto Stock Exchange 300 Composite Index, for Japan, Tokyo Stock Exchange (TOPIX), and for the United Kingdom, London Stock Exchange (FTSE 350), as reported by Bloomberg

Japan, and Canada fell 20 percent to 40 percent over the second half of last year and have continued to decline this year (figure 45). Long-term sovereign bond yields fell sharply in Europe and Canada in the latter part of 2008, which reflected both the easing of monetary policy and diminished growth prospects, but have risen somewhat, on balance, in early 2009 (figure 46). In contrast, yields on inflation-protected long-term securities rose in many countries, and inflation compensation

46. Yields on benchmark government bonds in selected advanced foreign economies, 2007–09




NOTE The data, which are for 10-year bonds, are daily The last observation for each series is February 18, 2009

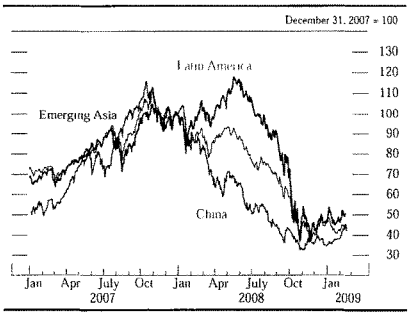
SOURCE Bloomberg

(the difference between yields on nominal securities and those on inflation-protected securities) fell sharply. As in the United States, measures of inflation compensation were quite volatile, however, as the liquidity of inflation-protected securities fell markedly.

Although in early 2008 the emerging market economies looked as if they might escape the most serious consequences of the financial crisis, the intensification of financial strains in September 2008 led to sharp and sudden capital outflows from many emerging markets as investors in the advanced economies sought to repatriate funds. Downdrafts in financial markets were reinforced by concerns over the effects of declining exports to the advanced economies and, for commodity exporters, plummeting commodity prices. Most stock markets in the emerging economies fell 20 percent to 40 percent, on net, over the second half of the year, and risk spreads on emerging market debt rose sharply (figure 47).

The Federal Reserve's broadest measure of the nominal trade-weighted foreign exchange value of the dollar rose about 12 percent, on net, over the second half of 2008 (figure 48). Much of this rise reflected gains against major foreign currencies. The dollar appreciated 13 percent against the euro, 20 percent against the Canadian dollar, and 36 percent against sterling (figure 49). The dollar's strength was attributable to several factors, including the realization by many inves-

47. Equity indexes in selected emerging market economies, 2007–09




NOTE The data are daily The last observation for each series is February 18, 2009 Because the Shanghai Stock Exchange was closed on December 31, 2007, the China index is scaled so that the December 28, 2007, closing value equals 100 The Latin American economies are Argentina, Brazil, Chile, Colombia, Mexico, and Peru The emerging Asian economies are China, India, Indonesia, Malaysia, Pakistan, the Philippines, South Korea, Taiwan, and Thailand

SOURCE For Latin America and emerging Asia, Morgan Stanley Capital International (MSCI) index, for China, Shanghai Composite Index, as reported by Bloomberg

48. U.S. dollar nominal exchange rate, broad index, 2005–09

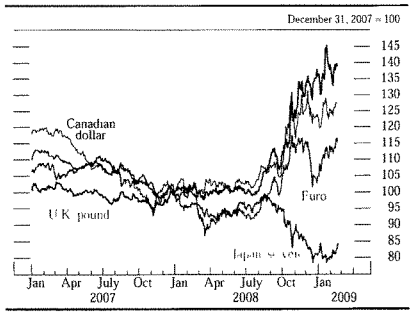



NOTE The data, which are in foreign currency units per dollar, are daily The last observation for the series is February 18, 2009 The broad index is a weighted average of the foreign exchange values of the U S dollar against the currencies of a large group of the most important U S trading partners The index weights, which change over time, are derived from U S export shares and from U S and foreign import shares
SOURCE Federal Reserve Board

tors that foreign growth would slow much more sharply than had been earlier anticipated as well as an increase in demand for the relative safety of U.S. assets such as Treasury securities. In contrast to its strength against other major currencies, the dollar depreciated 14 percent against the yen, as market volatility led many Japanese investors to sell foreign assets.

The dollar also rose against the currencies of most emerging market economies, including appreciation of more than 30 percent against both the Mexican peso and the Brazilian *real*. The dollar appreciated much less against most emerging Asian currencies, although it did rise more than 20 percent against the Korean won. In response to these pressures, many central banks in both Latin America and Asia intervened in support of their currencies.

49. U.S. dollar exchange rate against selected major currencies, 2007–09



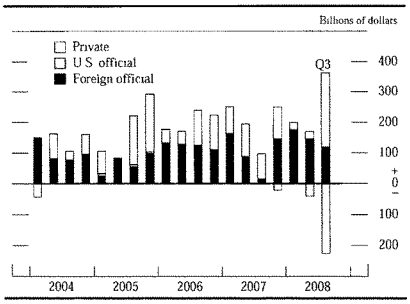

NOTE The data, which are in foreign currency units per dollar, are daily The last observation for each series is February 18, 2009
SOURCE Bloomberg

## The Financial Account

Although the current account deficit is estimated to have narrowed in 2008, it remains sizable. Turbulence in global financial markets has noticeably changed the composition of the associated financial flows. Before the turmoil, financial inflows were primarily in the form of net purchases of U.S. securities by foreign private investors and somewhat smaller net purchases by foreign official institutions. Since late 2007, however, foreign private net purchases of U.S. securities have dropped sharply, leaving foreign official inflows to play a much larger role (figure 50). Furthermore, whereas before the turmoil private foreign investors purchased large sums of U.S. assets issued by private entities, since then foreign investments—both official and private—have been dominated by a "flight to safety" to U.S. Treasury securities. Finally, in the third quarter of 2008, reductions in holdings of foreign assets by private U.S. residents played an unusual role, which added significantly to net private inflows.

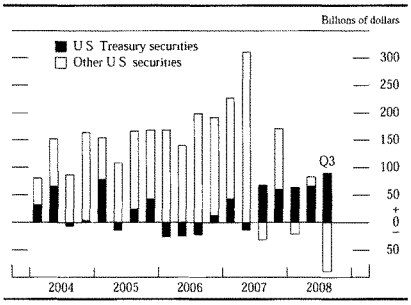
Overall, inflows from foreign private acquisitions of U.S. securities in 2008 were just one-fifth of the flows obtained in the previous two years, on average. Although purchases of U.S. Treasury securities rose considerably, there were unprecedented net sales in other U.S. securities in 2008 (figure 51). Foreign demand was particularly weak for U.S. agency and corporate

50. U.S. net financial inflows, 2004–08




SOURCE Department of Commerce, Bureau of Economic Analysis

51. Net private foreign purchases of U.S. securities, 2004–08




NOTE: Other U S securities include corporate equities and bonds, agency bonds, and municipal bonds.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

bonds, with the weakness especially pronounced in the second half of the year.

Foreign official net purchases of U.S. assets remained relatively steady in 2008, at a pace slightly above that of 2007. However, the composition of official net purchases in the third and fourth quarters moved sharply away from U.S. agency securities and was concentrated almost exclusively in U.S. Treasury securities. Foreign official acquisitions continued to be dominated by Asian institutions in 2008.

Prior to the turmoil, U.S. investors' net purchases of foreign securities typically generated a financial outflow. These purchases slowed following the turmoil and more recently have turned to sizable net sales—generating a financial inflow—as U.S. investors have pulled out of foreign investments. In addition, U.S. residents considerably reduced their deposits in foreign banks in 2008.

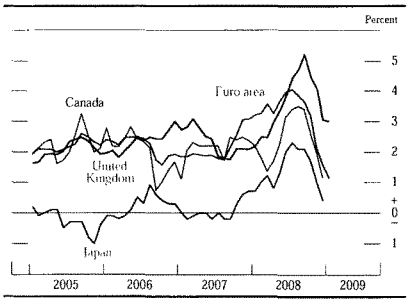
The turmoil also led to unusual flows from the banking sector and from official transactions in the form of the Federal Reserve's liquidity swap arrangements with foreign central banks. Net flows reported by banking offices in the United States are typically small. Since the onset of the turmoil through mid-2008, however, banks have generated unusually large outflows, in part reflecting a response to heightened demand resulting from interbank funding pressures in European markets. As central banks acted to address these concerns with the expansion of the swap arrangements in September 2008, the private banking outflows slowed to a halt. Foreign central banks eased dollar pressures abroad by lending to their domestic banks the dollar liquidity acquired from the Federal Reserve. Further drawings on the swap lines in October and December contributed to a strong reversal of banking flows (back toward the United States, on net) in the fourth quarter.

## Advanced Foreign Economies

Economic performance in the major advanced foreign economies weakened sharply in the second half of 2008, as global financial market turbulence, shrinking world trade, and collapsing business and consumer confidence weighed on activity. Across the advanced foreign economies, credit conditions and lending standards tightened considerably, industrial production declined, and retail sales slowed. Housing markets weakened everywhere and performed particularly poorly in countries that earlier had experienced housing booms, such as Ireland, Spain, and the United Kingdom. By the third quarter of last year, both Japan and the euro area had entered recessions, and output fell sharply in all the major advanced foreign economies in the fourth quarter, with most countries experiencing especially severe declines in exports and private investment.

After surging in response to accelerating commodity prices in the first half of last year, headline rates of inflation fell noticeably as a result of collapsing commodity prices and worsening economic conditions. The 12-month change in consumer prices peaked in the third quarter of 2008 for all the major economies, and the peak values ranged from a high of 5¼ percent in the United Kingdom to 2¼ percent in Japan. The most recent figures are substantially lower and range from 3 percent in the United Kingdom to below 1 percent in Japan (figure 52). Excluding food and energy prices,

52. Change in consumer prices for major foreign economies, 2005–09

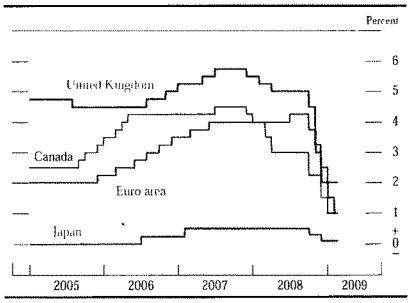



NOTE: The data are monthly, and the percent change is from one year earlier. The data extend through December 2008 for Canada and Japan and through January 2009 for the euro area and the United Kingdom.
SOURCE: Haver Analytics.

the swings in consumer price inflation have been more subdued. After moving up somewhat during most of 2008, core inflation is now declining in most advanced foreign economies.

Official monetary policy rates have been lowered significantly since the beginning of 2008 in response to severe financial market turbulence, decelerating economic activity, and waning inflation. After some easing early last year by the Bank of England and the Bank of Canada, rapidly rising food and energy costs led these central banks to pause, and, in the case of the European Central Bank (ECB), raise rates in the summer. However, in the fall, as financial conditions deteriorated and commodity prices fell, policymakers in the major industrial economies cut rates sharply, including a coordinated move in October. In total, the Bank of England has lowered its policy rate from 5½ percent in January of 2008 to 1 percent. The Bank of Canada and the ECB have also dropped rates to 1 percent and 2 percent, respectively. In Japan, interest rates were lowered to near zero in December (figure 53). In addition to substantial reductions in policy rates, central banks in the major advanced economies have taken a number of extraordinary measures to improve liquidity in financial markets, including the large-scale provision of term funding in local currency and dollar markets and the significant expansion of allowable collateral for central bank funding. Some foreign central banks are turning to or contemplating other measures to support activity, such as purchases of private-sector assets. Governments in the major industrial economies have also announced fiscal packages to bolster activity.

53. Official or targeted interest rates in selected advanced foreign economies, 2005–09




NOTE: The data are daily and extend through February 18, 2009. The data shown are, for Canada, the overnight rate; for the euro area, the minimum bid rate on main refinancing operations; for Japan, the call money rate; and, for the United Kingdom, the official bank rate paid on commercial reserves.
SOURCE: The central bank of each area or country shown.

## Emerging Market Economies

Economic performance weakened dramatically in emerging market countries in the second half of 2008. In the first half of the year, growth in many emerging market economies was relatively robust, and as food and energy prices soared, policymakers focused on containing inflationary pressure. However, in the second half, weaker demand from the advanced economies weighed on the export sectors of these countries, global financial turmoil led to tighter credit conditions, and in some cases, plunging commodity prices contributed to economic difficulties. By the end of the year, output in emerging market economies was dropping sharply, and inflationary pressures were moderating. These developments prompted policymakers in many countries to shift their focus to more stimulative monetary and fiscal policies to mitigate the effects of the economic downturn.

In China, the pace of activity slowed substantially in 2008, and concerns regarding high inflation and an overheating economy receded and gave way to efforts to bolster activity. Since September, Chinese authorities have lowered benchmark lending and deposit rates as well as bank reserve requirements several times. In November, a large fiscal stimulus plan that focused on infrastructure investment was announced, and Chinese authorities also enacted other policies designed to support the export sector, the real estate market, and small and medium-sized enterprises. After appreciating significantly in the first half of the year, the exchange value of the renminbi vis-à-vis the dollar was relatively stable in the second half of 2008.

Elsewhere in emerging Asia, the downturn in activity has been dramatic. Hong Kong, Singapore, South Korea, and Taiwan all posted substantial contractions in real GDP at the end of last year. Demand for these countries' goods from the advanced economies and China plunged in the second half of 2008, and authorities across emerging Asia have introduced more stimulative monetary and fiscal policies to bolster their economies.

In Mexico, growth was anemic in the first half of last year, but it improved in the third quarter, largely because of strong activity in the agricultural and service sectors. However, output is estimated to have declined sharply in the fourth quarter, as weakness in the U.S. manufacturing sector and financial stress have begun to weigh on the Mexican economy. In Brazil, economic activity remained firm through much of the year, but indicators suggest that output fell sharply in the fourth quarter.

Russia's economy and financial system experienced considerable stress over the second half of the year

because of the steep drop in oil and other commodity prices, the turmoil in global financial markets, and geopolitical tensions resulting from the conflict with Georgia. Russian international reserves fell substantially, largely because of interventions to support the currency and the financial and corporate sectors more broadly. Several countries in emerging Europe also came under significant financial pressures in the fourth quarter of 2008, which reflected the aftermath of a period of very high rates of credit expansion as well as large current account deficits and external financing needs. Hungary, Latvia, Serbia, and Ukraine received official assistance from the International Monetary Fund.

# Part 3
# Monetary Policy in 2008 and Early 2009

After easing the stance of monetary policy 225 basis points over the first half of 2008, the Federal Open Market Committee (FOMC) lowered the target federal funds rate further in the second half, ultimately bringing it to a range of 0 to ¼ percent (figure 54).[12] The Federal Reserve also took a number of additional actions to increase liquidity and improve market functioning. Some of these measures resulted in a substantial increase in the size of the Federal Reserve's balance sheet; further, the FOMC announced at its December meeting that the focus of policy going forward would be to support the functioning of financial markets and stimulate the economy through open market operations and other measures that would sustain the size of the Federal Reserve's balance sheet at a high level.

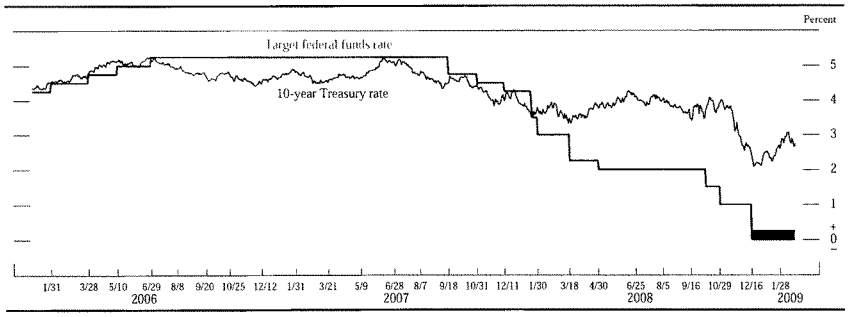
Information available last summer indicated that residential construction remained on a downward trend, the labor market had weakened further, and industrial production had declined. Although aggregate output was reported to have expanded in the second quarter, financial market developments suggested that the economy would likely come under considerable stress in the near future—in particular, tight credit conditions, the ongoing housing contraction, and the rise in energy prices were expected to weigh on economic growth over the subsequent few quarters. Core consumer price inflation remained relatively stable, but headline inflation was elevated as a result of large increases in food and energy prices.

With these considerations in mind, the FOMC kept the target federal funds rate unchanged at 2 percent at its August meeting. The accompanying policy statement indicated that, although downside risks to growth remained, the upside risks to inflation were also of significant concern to the Committee. This risk assessment, which many market participants reportedly interpreted as essentially balanced, was in line with expectations at the time. Accordingly, the expected path for policy was little changed in the wake of the announcement, and the response in broader financial markets was minimal.

By the time of the meeting on September 16, the outlook for inflation had moderated as a result of substantial declines in the prices of oil and other commodities as well as weakening aggregate demand. Various measures of inflation expectations declined between the two

12. *Members* of the FOMC in 2008 consisted of members of the Board of Governors of the Federal Reserve System plus the presidents of the Federal Reserve Banks of Cleveland, Dallas, Minneapolis, New York, and Philadelphia; in 2009, FOMC members consist of members of the Board of Governors plus the presidents of the Federal Reserve Banks of Atlanta, Chicago, New York, Richmond, and San Francisco. *Participants* at FOMC meetings consist of members of the Board of Governors and all Reserve Bank presidents.

54. Selected interest rates, 2006–09




NOTE The data are daily and extend through February 18, 2009 The 10-year Treasury rate is the constant-maturity yield based on the most actively traded securities The dates on the horizontal axis are those of regularly scheduled Federal Open Market Committee meetings

SOURCE Department of the Treasury and the Federal Reserve

meetings, nominal wage increases continued to be moderate, and productivity growth remained solid. In addition, declining employment and softening final sales contributed to a weaker outlook for near-term economic activity. Still, some firms reportedly were continuing to pass through to their customers previous increases in the costs of energy and raw materials, and readings on core and headline inflation remained elevated. In this environment, the Committee was concerned that high inflation might become embedded in expectations and thereby impart considerable momentum to overall inflation. Financial strains had increased over the intermeeting period, although the consequences of the bankruptcy of Lehman Brothers Holdings on September 15 were not yet clear at the time of the meeting. Indeed, the substantial easing of monetary policy over the previous year, combined with ongoing measures to foster market liquidity, was seen as likely to support activity going forward. Thus, members agreed that keeping the federal funds target rate unchanged at 2 percent at the September meeting was appropriate.

Over the following weeks, stresses in financial markets continued to mount. Interest rate spreads in interbank funding markets widened markedly, corporate and municipal bond yields rose, and equity prices dropped sharply. The decline in the net asset value of a major money market mutual fund below $1 per share sparked a flight out of prime money market funds and caused a severe impairment of the functioning of the commercial paper market. In response to the extraordinary stresses in financial markets, the Federal Reserve, together with U.S. government entities and many foreign central banks and governments, implemented a number of unprecedented policy initiatives. Measures taken by the Federal Reserve around this time, discussed in detail in the appendix, included the establishment of the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, Commercial Paper Funding Facility, and Money Market Investor Funding Facility, which were intended to improve the liquidity in short-term debt markets and ease the strains in credit markets more broadly. In addition, to address the sizable demand for dollar funding in foreign jurisdictions, the FOMC authorized increases in its existing liquidity swap lines with foreign central banks and established lines with additional central banks. In domestic markets, the Federal Reserve raised the regular auction amounts of the 28- and 84-day maturity Term Auction Facility (TAF) auctions and announced two forward TAF auctions to provide funding over year-end.

The expansion of existing liquidity facilities and the creation of new facilities contributed to a substantial increase in the size of the Federal Reserve's balance sheet. Two initiatives were introduced to help manage the expansion of the balance sheet and promote control of the federal funds rate. First, on September 17, the Treasury announced a temporary Supplementary Financing Program at the request of the Federal Reserve. Under this program, the Treasury issues short-term bills over and above its regular borrowing program, with the proceeds deposited at the Federal Reserve. Second, using authority granted under the Emergency Economic Stabilization Act, the Federal Reserve announced on October 6 that it would begin paying interest on required and excess reserve balances. The payment of interest on excess reserves was intended to assist in maintaining the federal funds rate close to the target set by the Committee by creating a floor on interbank market rates. Initially, the interest rate paid on required reserve balances was set as a spread below the average targeted federal funds rate established by the FOMC over each reserve maintenance period, and the rate paid on excess balances was set as a spread below the lowest targeted federal funds rate for each reserve maintenance period. Subsequently, with the federal funds rate trading consistently below the target rate, the spreads were eliminated.

In late September and into October, macroeconomic conditions deteriorated in both the United States and Europe, prices of crude oil and other commodities dropped substantially, and some measures of expected inflation declined. In light of these developments and the extraordinary turmoil in financial markets, the Committee members agreed that downside risks to economic growth had increased and that upside risks to inflation had diminished; at an unscheduled meeting in early October, the FOMC cut its target to 1½ percent in an unprecedented coordinated policy action with five other major central banks. This action, along with the accompanying statement, led investors to mark down further the expected path for the federal funds rate.

At its October 28–29 meeting, the FOMC lowered its target for the federal funds rate an additional 50 basis points, to 1 percent. The Committee's statement noted that economic activity appeared to have slowed markedly, a development due importantly to weakening consumer and business spending and softening demand from many foreign economies. Moreover, the intensification of financial market turmoil was likely to exert additional restraint on spending by further tightening credit conditions for households and businesses. The Committee noted that, in light of the declines in the prices of energy and other commodities and the weaker prospects for economic activity, it expected inflation to moderate in coming quarters to levels consistent with price stability. With risks to economic activity to the

downside, the Committee indicated that it would monitor economic and financial developments carefully and act as needed to promote sustainable economic growth and price stability.

The decision of the FOMC at its October meeting was broadly in line with market expectations and elicited only a modest reaction in financial markets However, subsequent economic data releases suggested that economic activity was weaker and inflation lower than had been earlier anticipated. Those readings, along with continued strains in financial markets that weighed on investor sentiment, contributed to a sharp downward revision in the expected path of policy over the following weeks. Reflecting investor concerns about the condition of financial institutions, spreads on credit default swaps for U.S. banks widened sharply, and those for insurance companies remained very elevated.

Available evidence also suggested further tightening in consumer and small business credit conditions; in view of this tightening, the Federal Reserve announced on November 25 plans for the Term Asset-Backed Securities Loan Facility (TALF) to support lending to these borrowers. The Federal Reserve also announced on November 25 that, to help reduce the cost and increase the availability of residential mortgage credit, it would initiate a program to purchase up to $100 billion in direct obligations of housing-related government-sponsored enterprises and up to $500 billion in mortgage-backed securities (MBS) backed by Fannie Mae, Freddie Mac, and Ginnie Mae. The announcement and implementation of the agency purchase program appeared to reduce spreads on agency debt; conditions for high-quality borrowers in the primary residential mortgage market subsequently recovered somewhat.

Although some financial markets exhibited signs of improved functioning ahead of the December meeting, financial conditions generally remained very strained. Credit conditions had continued to tighten for both households and businesses, and ongoing declines in equity and house prices further reduced household wealth. Against this backdrop, indicators of aggregate economic activity continued to worsen. The Committee expected economic activity to contract sharply in the fourth quarter of 2008 and in early 2009; it noted that the uncertainty surrounding the outlook was considerable and that the downside risk to even this dour trajectory for economic activity was a serious concern. Inflation pressures had diminished appreciably as energy and other commodity prices dropped and economic activity slumped. Looking forward, members agreed that inflation pressures appeared set to moderate further in coming quarters, and some saw risks that inflation could drop below rates they viewed as most consistent over time with the Federal Reserve's dual mandate for maximum employment and price stability.

With the federal funds rate already trading at very low levels as a result of the large volume of excess reserves associated with the Federal Reserve's liquidity operations, participants agreed that the Committee would soon need to use other tools to impart additional monetary stimulus to the economy. The Federal Reserve had already adopted a series of programs that were providing liquidity support to a range of institutions and markets, and a continued focus on the quantity and the composition of Federal Reserve assets appeared to be necessary and desirable. Participants agreed that maintenance of a low level of short-term interest rates for some time and reliance on the use of balance sheet policies and communications about monetary policy could be effective and appropriate, in light of the sharp deterioration in the economic outlook and the appreciable easing of inflationary pressures.

Accordingly, the Committee announced a target range for the federal funds rate of 0 to ¼ percent and indicated that weak economic conditions were likely to warrant exceptionally low levels of the federal funds rate for some time. The statement also noted that the size of the Federal Reserve's balance sheet would be maintained at a high level through open market operations and other measures to support financial markets and stimulate the economy. In addition, the statement indicated that the Committee stood ready to expand purchases of agency debt and agency MBS and that it was evaluating the potential benefits of purchasing longer-term Treasury securities. The FOMC members emphasized that their expectation about the path of the federal funds rate was conditioned on their view of the likely path of economic activity. The interest rates on required reserve balances and excess reserve balances were both set at 25 basis points. These monetary policy decisions apparently were more aggressive than investors had been expecting. Market participants were somewhat surprised both by the size of the reduction in the target federal funds rate and by the statements that policy rates would likely remain low for some time and that the FOMC might engage in additional nontraditional policy actions such as the purchase of longer-term Treasury securities.

Incoming data over the following weeks indicated a continued sharp contraction in economic activity. The housing market remained on a steep downward trend, consumer spending continued its significant decline, the slowdown in business equipment investment intensified, and foreign demand weakened. Conditions in the labor market continued to deteriorate rapidly, and the drop in industrial production accelerated. Head-

line consumer prices fell in November and December, which reflected declines in consumer energy prices; core consumer prices were about flat in those months. Credit conditions generally remained tight, with financial markets fragile and some parts of the banking sector under substantial stress. However, modest signs of improvement were evident in some financial markets—particularly those that were receiving support from Federal Reserve liquidity facilities and other government actions.

At the meeting in January 2009, participants anticipated that a gradual recovery in U.S. economic activity would begin in the second half of the year in response to monetary easing, another dose of fiscal stimulus, relatively low energy prices, and continued efforts by the government to stabilize the financial sector and increase the availability of credit. As of late January, however, with financial conditions strained and the near-term economic outlook weak, most participants agreed that the Committee should continue to focus on supporting the functioning of financial markets and stimulating the economy through purchases of agency debt and MBS and other measures—including the implementation of the TALF—that will keep the size of the Federal Reserve's balance sheet at a high level for some time. Committee members agreed that keeping the target range for the federal funds rate at 0 to ¼ percent would be appropriate. They also agreed to continue using liquidity and asset-purchase programs to support the functioning of financial markets and to stimulate the economy.

In its January statement, the FOMC reemphasized that the Federal Reserve will use all available tools to promote the resumption of sustainable economic growth and to preserve price stability. The Committee also stated that, in addition to the purchases of agency debt and MBS already under way, it was prepared to purchase longer-term Treasury securities if evolving circumstances indicated that such transactions would be particularly effective in improving conditions in private credit markets. The Committee will continue to monitor carefully the size and composition of the Federal Reserve's balance sheet in light of evolving financial market developments. It will also continue to assess whether expansions of, or modifications to, lending facilities would serve to further support credit markets and economic activity and help preserve price stability.

# Part 4
# Summary of Economic Projections

*The following material appeared as an addendum to the minutes of the January 27–28, 2009, meeting of the Federal Open Market Committee.*

In conjunction with the January 27–28, 2009 FOMC meeting, the members of the Board of Governors and the presidents of the Federal Reserve Banks, all of whom participate in deliberations of the FOMC, provided projections for economic growth, unemployment, and inflation in 2009, 2010, 2011, and over the longer run. Projections were based on information available through the conclusion of the meeting, on each participant's assumptions regarding a range of factors likely to affect economic outcomes, and on his or her assessment of appropriate monetary policy. "Appropriate monetary policy" is defined as the future policy that, based on current information, is deemed most likely to foster outcomes for economic activity and inflation that best satisfy the participant's interpretation of the Federal Reserve's dual objectives of maximum employment and price stability. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge over time under appropriate monetary policy and in the absence of further shocks.

FOMC participants viewed the outlook for economic activity and inflation as having weakened significantly since last October, when their last projections were made. As indicated in Table 1 and depicted in Figure 1, participants projected that real GDP would contract this year, that the unemployment rate would increase substantially, and that consumer price inflation would be significantly lower than in recent years. Given the strength of the forces currently weighing on the economy, participants generally expected that the recovery would be unusually gradual and prolonged: All participants anticipated that unemployment would remain substantially above its longer-run sustainable rate at the end of 2011, even absent further economic shocks; a few indicated that more than five to six years would be needed for the economy to converge to a longer-run path characterized by sustainable rates of output growth and unemployment and by an appropriate rate of inflation. Participants generally judged that their projections for both economic activity and inflation were subject to a degree of uncertainty exceeding historical norms. Nearly all participants viewed the risks to the growth outlook as skewed to the downside, and all participants saw the risks to the inflation outlook as either balanced or tilted to the downside.

Table 1. Economic projections of Federal Reserve Governors and Reserve Bank presidents, January 2009

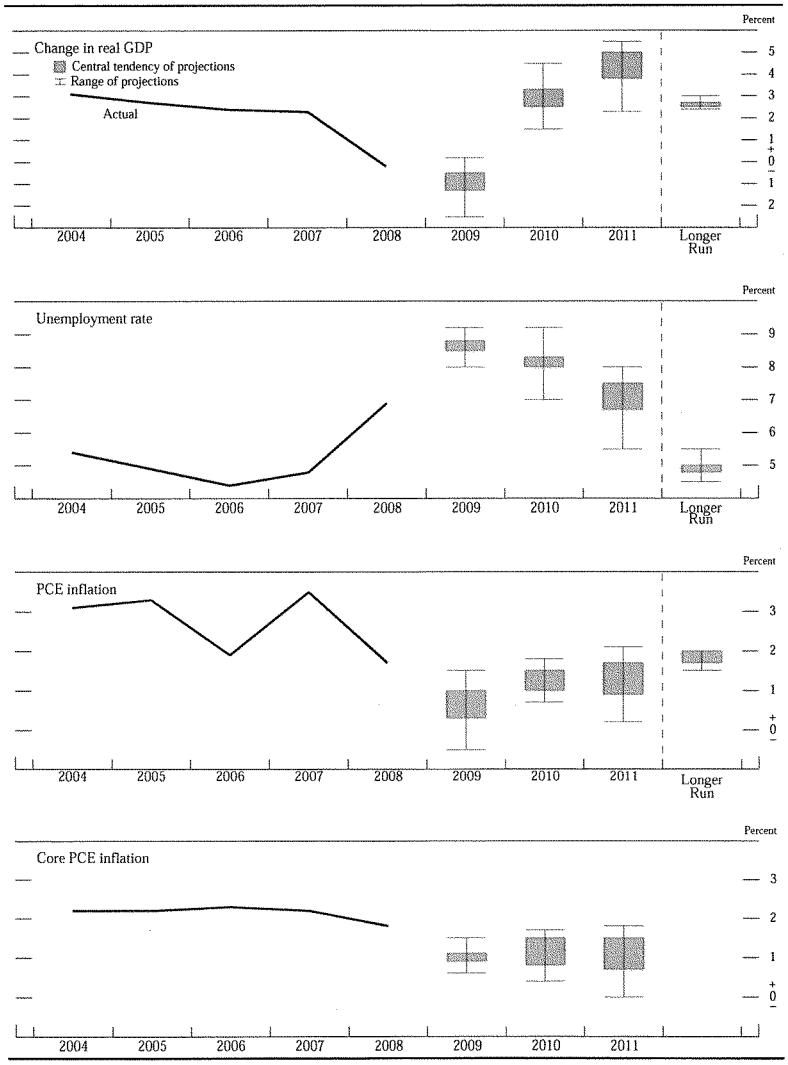
Percent

| Variable | Central tendency[1] | | | | Range[2] | | | |
|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | Longer Run | 2009 | 2010 | 2011 | Longer Run |
| Change in real GDP | -1.3 to -0.5 | 2.5 to 3.3 | 3.8 to 5.0 | 2.5 to 2.7 | -2.5 to 0.2 | 1.5 to 4.5 | 2.3 to 5.5 | 2.4 to 3.0 |
| October projection | -0.2 to 1.1 | 2.3 to 3.2 | 2.8 to 3.6 | n.a. | -1.0 to 1.8 | 1.5 to 4.5 | 2.0 to 5.0 | n.a. |
| Unemployment rate | 8.5 to 8.8 | 8.0 to 8.3 | 6.7 to 7.5 | 4.8 to 5.0 | 8.0 to 9.2 | 7.0 to 9.2 | 5.5 to 8.0 | 4.5 to 5.5 |
| October projection | 7.1 to 7.6 | 6.5 to 7.3 | 5.5 to 6.6 | n.a. | 6.6 to 8.0 | 5.5 to 8.0 | 4.9 to 7.3 | n.a. |
| PCE inflation | 0.3 to 1.0 | 1.0 to 1.5 | 0.9 to 1.7 | 1.7 to 2.0 | -0.5 to 1.5 | 0.7 to 1.8 | 0.2 to 2.1 | 1.5 to 2.0 |
| October projection | 1.3 to 2.0 | 1.4 to 1.8 | 1.4 to 1.7 | n.a. | 1.0 to 2.2 | 1.1 to 1.9 | 0.8 to 1.8 | n.a. |
| Core PCE inflation[3] | 0.9 to 1.1 | 0.8 to 1.5 | 0.7 to 1.5 | | 0.6 to 1.5 | 0.4 to 1.7 | 0.0 to 1.8 | |
| October projection | 1.5 to 2.0 | 1.3 to 1.8 | 1.3 to 1.7 | | 1.3 to 2.1 | 1.1 to 1.9 | 0.8 to 1.8 | |

NOTE: Projections of change in real gross domestic product (GDP) and of inflation are from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The October projections were made in conjunction with the FOMC meeting on October 28-29, 2008

1. The central tendency excludes the three highest and three lowest projections for each variable in each year.
2. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.
3. Longer-run projections for core PCE inflation are not collected

Figure 1. Central tendencies and ranges of economic projections, 2009–11 and over the longer run




NOTE: Definitions of variables are in the notes to table 1. The data for the actual values of the variables are annual.

## The Outlook

Participants' projections for the change in real GDP in 2009 had a central tendency of -1.3 to -0.5 percent, compared with the central tendency of -0.2 to 1.1 percent for their projections last October. In explaining these downward revisions, participants referred to the further intensification of the financial crisis and its effect on credit and wealth, the waning of consumer and business confidence, the marked deceleration in global economic activity, and the weakness of incoming data on spending and employment. Participants anticipated a broad-based decline in aggregate output during the first half of this year; they noted that consumer spending would likely be damped by the deterioration in labor markets, the tightness of credit conditions, the continuing decline in house prices, and the recent sharp reduction in stock market wealth, and they saw reductions in consumer demand contributing to further weakness in business investment. However, participants expected that the economy would begin to recover—albeit gradually—during the second half of the year, mainly reflecting the effects of fiscal stimulus and of Federal Reserve measures providing support to credit markets.

Looking further ahead, participants' growth projections had a central tendency of 2.5 to 3.3 percent for 2010 and 3.8 to 5.0 percent for 2011. Participants generally expected that strains in financial markets would ebb only slowly and hence that the pace of recovery in 2010 would be damped. Nonetheless, participants generally anticipated that real GDP growth would gain further momentum in 2011, reaching a pace that would temporarily exceed their estimates of the longer-run sustainable rate of economic growth and would thereby help reduce the slack in resource utilization. Most participants expected that, absent further shocks, economic growth would eventually converge to a rate of 2.5 to 2.7 percent, reflecting longer-term trends in the growth of productivity and the labor force.

Participants anticipated that labor market conditions would deteriorate substantially further over the course of this year, and nearly all expected that unemployment would still be well above its longer-run sustainable rate at the end of 2011. Participants' projections for the average unemployment rate during the fourth quarter of 2009 had a central tendency of 8.5 to 8.8 percent, markedly higher than last December's actual unemployment rate of 7.2 percent—the latest available figure at the time of the January FOMC meeting. Nearly all participants' projections were more than a percentage point higher than their previous forecasts made last October, reflecting the sharp rise in actual unemployment that occurred during the final months of 2008 as well as participants' weaker outlook for economic activity this year. Most participants anticipated that output growth in 2010 would not be substantially above its longer-run trend rate and hence that unemployment would decline only modestly next year. With economic activity and job creation generally projected to accelerate in 2011, participants anticipated that joblessness would decline more appreciably that year, as is evident from the central tendency of 6.7 to 7.5 percent for their unemployment rate projections. Participants expected that the unemployment rate would decline further after 2011, and most saw it settling in at a rate of 4.8 to 5.0 percent over time.

The central tendency of participants' projections for total PCE inflation this year was 0.3 to 1.0 percent, about a percentage point lower than the central tendency of their projections last October. Many participants noted that recent readings on inflation had been surprisingly low, and some anticipated that the unexpected declines in the prices of energy and other commodities that had occurred in the latter part of 2008 would continue to hold down inflation at the consumer level in 2009. Participants also marked down their projections for core PCE inflation this year in light of their views about the indirect effects of lower energy prices and the influence of increased resource slack.

Looking beyond this year, participants' projections for total PCE inflation had a central tendency of 1.0 to 1.5 percent for 2010, 0.9 to 1.7 percent for 2011, and 1.7 to 2.0 percent over the longer run. Participants' longer-run projections for total PCE inflation reflected their individual assessments of the measured rates of inflation consistent with the Federal Reserve's dual mandate for promoting price stability and maximum employment. Most participants judged that a longer-run PCE inflation rate of 2 percent would be consistent with the dual mandate; others indicated that 1½ or 1¾ percent inflation would be appropriate. Modestly positive longer-run inflation would allow the Committee to stimulate economic activity and support employment by setting the federal funds rate temporarily below the inflation rate when the economy is buffeted by a large negative shock to demands for goods and services. Participants generally expected that core and overall inflation would converge over time, and that persistent economic slack would continue to weigh on inflation outcomes for the next few years and hence that total PCE inflation in 2011 would still be below their assessments of the appropriate inflation rate for the longer run.

## Risks to the Outlook

Participants continued to view uncertainty about the outlook for economic activity as higher than normal.[13] The risks to their projections for real GDP growth were judged as being skewed to the downside and the associated risks to their projections for the unemployment rate were tilted to the upside. Participants highlighted the considerable degree of uncertainty about the future course of the financial crisis and its impact on the real economy; for example, rising unemployment and weaker growth could exacerbate delinquencies on household and business loans, leading to higher losses for financial firms and so to a further tightening of credit conditions that would in turn put further downward pressure on spending to a greater degree than currently foreseen. In addition, some participants noted that a substantial degree of uncertainty was associated with gauging the stimulative effects of nontraditional monetary policy tools that are now being employed given that conventional policy easing was limited by the zero lower bound on nominal interest rates. Others referred to uncertainties regarding the size, composition, and effectiveness of the fiscal stimulus package—which was still under consideration at the time of the FOMC meeting—and of further measures to stabilize the banking system.

As in October, most participants continued to view the uncertainty surrounding their inflation projections as higher than historical norms. A slight majority of participants judged the risks to the inflation outlook as roughly balanced, while the rest viewed these risks as skewed to the downside. Participants indicated that elevated uncertainty about global growth was clouding the outlook for prices of energy and other commodities and hence contributing to greater uncertainty in their inflation projections. Many participants stated that their assessments regarding the level of uncertainty and balance of risks to the inflation outlook were closely linked to their judgments about the uncertainty and risks to the outlook for economic activity. Some participants noted the risk that inflation expectations might become unanchored and drift downward in response to persistently low inflation outcomes, while others pointed to the possibility of an upward shift if investors became concerned that stimulative policy measures might not be unwound in a timely fashion once the economy begins to recover.

13. Table 2 provides estimates of forecast uncertainty for the change in real GDP, the unemployment rate, and total consumer price inflation over the period from 1987 to 2007. At the end of this summary, the box "Forecast Uncertainty" discusses the sources and interpretation of uncertainty in economic forecasts and explains the approach used to assess the uncertainty and risks attending participants' projections.

Table 2. Average historical projection error ranges

Percentage points

| Variable | 2009 | 2010 | 2011 |
|---|---|---|---|
| Change in real GDP[1] | ±1.2 | ±1.4 | ±1.4 |
| Unemployment rate[1] | ±0.5 | ±0.8 | ±1.0 |
| Total consumer prices[2] | ±0.9 | ±1.0 | ±0.9 |

NOTE. Error ranges shown are measured as plus or minus the root mean squared error of projections that were released in the winter from 1987 through 2007 for the current and following two years by various private and government forecasters. As described in the box "Forecast Uncertainty," under certain assumptions, there is about a 70 percent probability that actual outcomes for real GDP, unemployment, and consumer prices will be in ranges implied by the average size of projection errors made in the past. Further information is in David Reifschneider and Peter Tulip (2007), "Gauging the Uncertainty of the Economic Outlook from Historical Forecasting Errors," Finance and Economics Discussion Series 2007-60 (Board of Governors of the Federal Reserve System, November).

1. For definitions, refer to general note in table 1.

2. Measure is the overall consumer price index, the price measure that has been most widely used in government and private economic forecasts. Projection is percent change, fourth quarter of the previous year to the fourth quarter of the year indicated. The slightly narrower estimated width of the confidence interval for inflation in the third year compared with that for the second year is likely the result of using a limited sample period for computing these statistics.

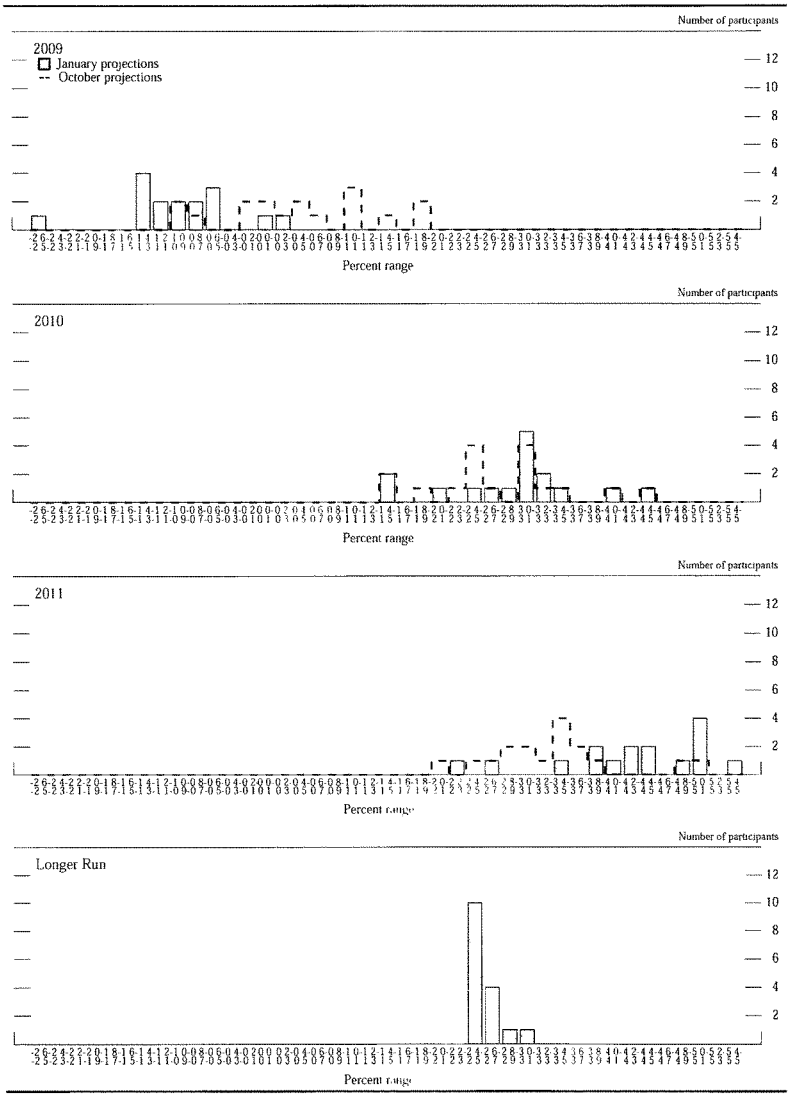
## Diversity of Views

Figures 2.A and 2.B provide further details on the diversity of participants' views regarding likely outcomes for real GDP growth and the unemployment rate, respectively. For 2009 to 2011, the dispersion in participants' projections for each variable was roughly the same as for their projections last October. This dispersion mainly indicated the diversity of participants' assessments regarding the stimulative effects of fiscal policy, the pace of recovery in financial markets, and the evolution of households' desired saving rates. The dispersion in participants' longer-run projections reflected differences in their estimates regarding the sustainable rates of output growth and unemployment to which the economy would converge under appropriate policy and in the absence of any further shocks.

Figures 2.C and 2.D provide corresponding information regarding the diversity of participants' views regarding the inflation outlook. The dispersion in participants' projections for total PCE inflation in 2009 was substantially greater than for their projections made last October, due to increased diversity of participants' views regarding the near-term evolution of prices of energy and raw materials and the extent to which changes in those prices would be likely to pass through into overall inflation. The dispersion in participants' projections for core PCE inflation in 2009 was noticeably lower than last October, but the dispersion in their

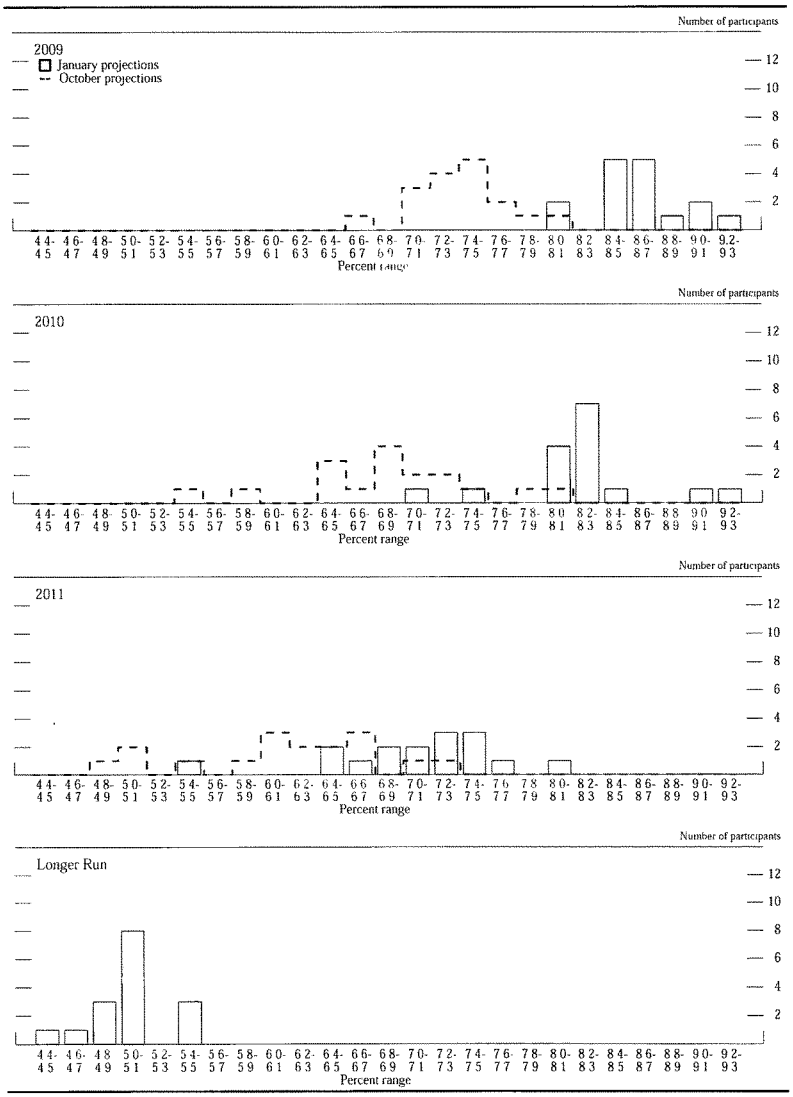
projections for core inflation in 2010 and 2011 was markedly wider, reflecting varying assessments about the timing and pace of economic recovery, the sensitivity of inflation to slack in resource utilization, the prevalence of downward nominal wage rigidity, and the likelihood that inflation expectations will remain firmly anchored. A few participants anticipated that inflation in 2011 would be close to their longer-run projections. However, most participants' projections for total PCE inflation in 2011 were below their longer-run projections, primarily reflecting the anticipated effects of substantial slack over the next three years; this inflation gap was about ¼ to ½ percentage point for some participants but exceeded a full percentage point for others.

Figure 2.A. Distribution of participants' projections for the change in real GDP, 2009–11 and over the longer run



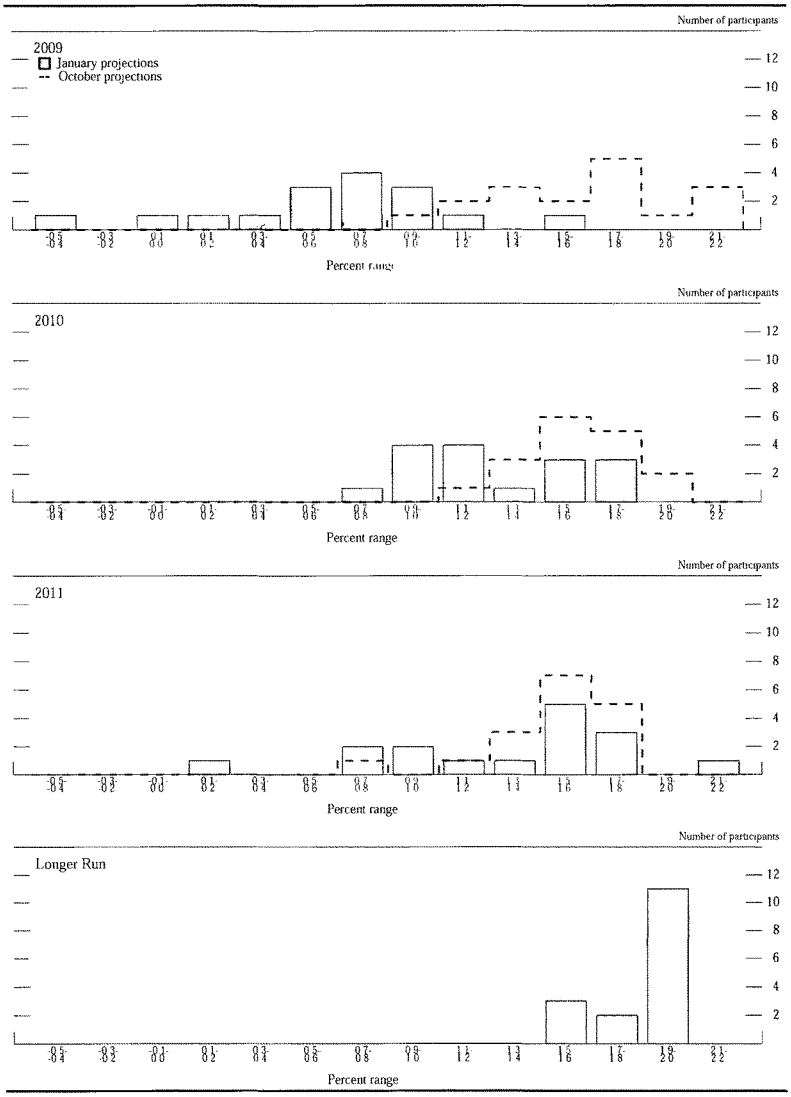

NOTE Definitions of variables are in the general note to table 1

Figure 2.B. Distribution of participants' projections for the unemployment rate, 2009–11 and over the longer run



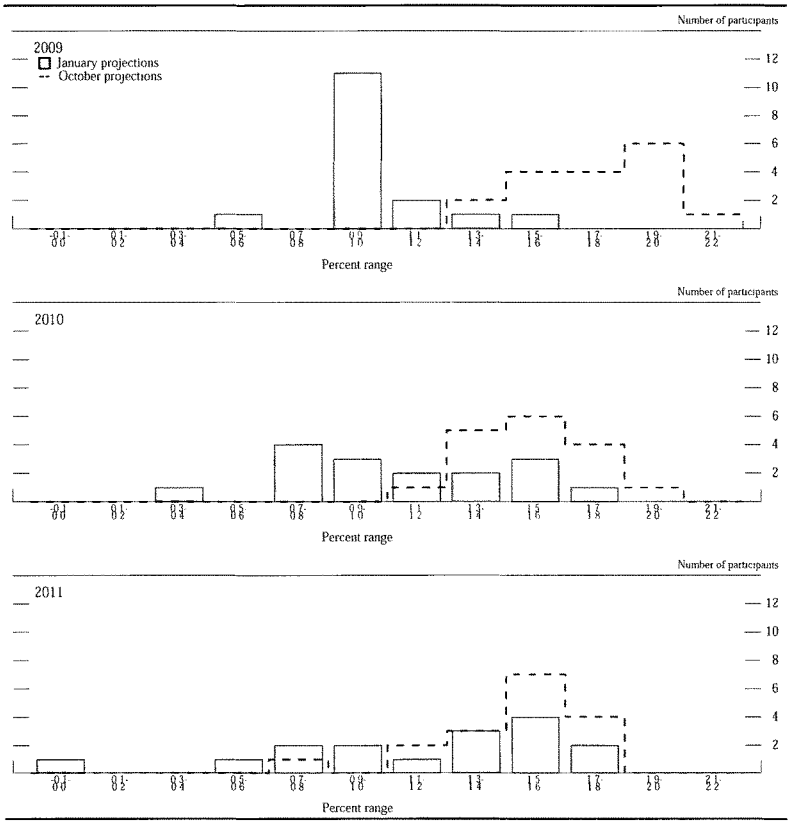

NOTE Definitions of variables are in the general note to table 1

Figure 2.C. Distribution of participants' projections for PCE inflation, 2009–11 and over the longer run




NOTE Definitions of variables are in the general note to table 1

Figure 2.D. Distribution of participants' projections for core PCE inflation, 2009–11




NOTE Definitions of variables are in the general note to table 1

## Forecast Uncertainty

The economic projections provided by the members of the Board of Governors and the presidents of the Federal Reserve Banks inform discussions of monetary policy among policymakers and can aid public understanding of the basis for policy actions. Considerable uncertainty attends these projections, however. The economic and statistical models and relationships used to help produce economic forecasts are necessarily imperfect descriptions of the real world. And the future path of the economy can be affected by myriad unforeseen developments and events. Thus, in setting the stance of monetary policy, participants consider not only what appears to be the most likely economic outcome as embodied in their projections, but also the range of alternative possibilities, the likelihood of their occurring, and the potential costs to the economy should they occur.

Table 2 summarizes the average historical accuracy of a range of forecasts, including those reported in past Monetary Policy Reports and those prepared by Federal Reserve Board staff in advance of meetings of the Federal Open Market Committee. The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real GDP and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand between 1.8 percent to 4.2 percent in the current year and 1.6 percent to 4.4 percent in the second and third years. The corresponding 70 percent confidence intervals for overall inflation would be 1.1 percent to 2.9 percent in the current year, 1.0 percent to 3.0 percent in the second year, and 1.1 percent to 2.9 percent in the third year.

Because current conditions may differ from those that prevailed on average over history, participants provide judgments as to whether the uncertainty attached to their projections of each variable is greater than, smaller than, or broadly similar to typical levels of forecast uncertainty in the past as shown in table 2. Participants also provide judgments as to whether the risks to their projections are weighted to the upside, downside, or are broadly balanced. That is, participants judge whether each variable is more likely to be above or below their projections of the most likely outcome. These judgments about the uncertainty and the risks attending each participant's projections are distinct from the diversity of participants' views about the most likely outcomes. Forecast uncertainty is concerned with the risks associated with a particular projection, rather than with divergences across a number of different projections.

# Appendix
# Federal Reserve Initiatives to Address Financial Strains

Since the onset of the financial turmoil in the summer of 2007, the Federal Reserve has announced several new measures to address the strains in financial markets, as well as enhancements to its existing liquidity facilities. (For outstanding balances related to these facilities, see table.)

## Provision of Liquidity to Banks and Dealers

### *Modifications to the Primary Credit Program*

Following the onset of the financial turmoil, the Federal Reserve Board announced temporary changes to its primary credit discount window facility on August 17, 2007. These changes were designed to provide depositories with greater assurance about the cost and availability of funding. First, the Federal Reserve Board approved a 50 basis point reduction in the primary credit rate to narrow the spread between the primary credit rate and the Federal Open Market Committee's target federal funds rate to 50 basis points. Second, the Federal Reserve Board announced a change to the Reserve Banks' usual practices to allow the provision of term financing for as long as 30 days, renewable by the borrower.

To bolster market liquidity further in the face of increasing financial strains, on March 16, 2008, the Federal Reserve Board unanimously approved a request by the Federal Reserve Banks to decrease the spread of the primary credit rate over the FOMC's target federal funds rate to ¼ percentage point. The Board also approved an increase in the maximum maturity of primary credit loans to 90 days from 30 days.

### *The Term Auction Facility*

To address elevated pressures in short-term funding markets, in December 2007 the Board of Governors of the Federal Reserve System approved the establishment of a Term Auction Facility (TAF). Under this program, the Federal Reserve auctions term funds to depository institutions against the wide variety of collateral that can be used to secure loans at the discount window. By increasing the access of depository institutions to funding, the TAF has supported the ability of such institutions to meet the credit needs of their customers.

Each depository institution that is judged to be in generally sound financial condition by its Reserve Bank (and likely to remain so over the term of the loan) can participate in TAF auctions. All advances must be fully collateralized. Each TAF auction is for a fixed amount of funds, with the rate determined by the auction process (subject to a minimum bid rate). A depository institution submits bids through its Reserve Bank. The minimum bid rate for the auctions was initially established at the overnight index swap (OIS) rate corresponding to the maturity of the credit being auctioned. In January 2009, the minimum bid rate was changed to the interest

Federal Reserve provision of liquidity and credit, 2007–09

Millions of dollars

| Asset | Dec. 31, 2007 | June 30, 2008 | Feb. 18, 2009 |
|---|---|---|---|
| *Provision of liquidity to banks and dealers* | | | |
| Primary credit program | 8,620 | 24,095 | 65,144 |
| Term Auction Facility | 40,000 | 150,000 | 447,563 |
| Liquidity swaps with foreign central banks | 21,000 | 62,000 | 375,005 |
| Securities lent under the Term Securities Lending Facility | n.a. | 104,097 | 115,280 |
| Primary Dealer Credit Facility and other broker-dealer credit | n.a. | 1,455 | 25,268 |
| *Provision of liquidity to other market participants* | | | |
| Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility | n.a. | n.a. | 12,722 |
| Net portfolio holdings of Commercial Paper Funding Facility | n.a | n.a. | 248,671 |
| Net portfolio holdings of LLCs funded through the Money Market Investor Funding Facility | n.a. | n.a. | 0 |
| *Support of critical institutions* | | | |
| Net portfolio holdings of Maiden Lane I, II, and III LLCs[1] | n.a. | 29,970 | 72,231 |
| Credit extended to American International Group, Inc. | n.a. | n.a. | 37,357 |

NOTE: LLC is a limited liability company

1 The Federal Reserve has extended credit to several LLCs in conjunction with efforts to support critical institutions. Maiden Lane LLC was formed to acquire certain assets of The Bear Stearns Companies, Inc. Maiden Lane II LLC was formed to purchase residential mortgage-backed securities from the U.S. securities lending reinvestment portfolio of subsidiaries of American International Group, Inc. (AIG). Maiden Lane III LLC was formed to purchase multi-sector collateralized debt obligations on which the Financial Products group of AIG has written credit default swap contracts

n.a. Not available.

SOURCE: Federal Reserve Board.

rate paid by the Federal Reserve on excess reserve balances.

Initially, TAF auctions were in amounts of $20 billion and provided primarily 28-day term funds. Over the course of 2008, the Federal Reserve extended the term of some auctions to 84 days and raised the regular amounts of both the 28- and 84-day TAF auctions to $150 billion. The Federal Reserve also conducted two forward TAF auctions in November for $150 billion each, which provided funding over year-end.

### *Liquidity Swap Lines with Foreign Central Banks*

To address the increasing demand for dollar funding in foreign jurisdictions, in December 2007, the Federal Open Market Committee (FOMC) authorized temporary reciprocal currency arrangements (swap lines) with the European Central Bank (ECB) and the Swiss National Bank (SNB). These arrangements initially provided dollars in amounts of up to $20 billion and $4 billion to the ECB and the SNB, respectively, for use in their jurisdictions. The FOMC approved these liquidity swap lines for a period of up to six months and later extended this term to October 30, 2009.

As demand for dollar funding rose further over the course of 2008, the FOMC authorized the expansion of its existing swap lines with the ECB and SNB. In the fall, the formal quantity limits on these lines, as well as on swap lines that were set up with the Bank of Japan and the Bank of England, were eliminated. The FOMC also authorized new liquidity swap lines with 10 other central banks: the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Canada, the Danmarks Nationalbank, the Bank of Korea, the Bank of Mexico, the Reserve Bank of New Zealand, the Norges Bank, the Monetary Authority of Singapore, and the Sveriges Riksbank.

### *The Term Securities Lending Facility*

On March 11, 2008, to address increasing liquidity pressures in funding markets, the Federal Reserve announced the establishment of a Term Securities Lending Facility (TSLF). Under the TSLF, the Federal Reserve lends up to $200 billion of Treasury securities to primary dealers for a term of 28 days (rather than overnight, as in the regular securities lending program); the lending is secured by a pledge of other securities. Initially, the eligible collateral included other Treasury securities, federal agency debt, federal agency residential mortgage-backed securities (MBS), and non-agency AAA/Aaa-rated private-label residential MBS. In September, this list was broadened to include all investment-grade debt securities. The TSLF is intended to strengthen the financing position of primary dealers and foster improved conditions in financial markets more generally. Securities are made available through weekly auctions. This facility is currently scheduled to expire on October 30, 2009.

### *The Primary Dealer Credit Facility*

To bolster market liquidity and promote orderly market functioning, on March 16, 2008, the Federal Reserve Board voted unanimously to authorize the Federal Reserve Bank of New York to create a lending facility—the Primary Dealer Credit Facility—to improve the ability of primary dealers to provide financing to participants in securitization markets. This facility became available for business on Monday, March 17, and was originally instituted for a term of six months; this term was subsequently extended, and the facility is currently set to expire on October 30, 2009. Collateral pledged to secure loans under this facility was initially limited to investment-grade debt securities; subsequently, eligible collateral was expanded to include all collateral eligible for pledge in triparty funding arrangements through the major clearing banks. The interest rate charged on such credit is the same as the primary credit rate at the Federal Reserve Bank of New York.

## Provision of Liquidity to Other Market Participants

### *The Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility*

On September 19, 2008, the Federal Reserve announced the creation of the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF). Under this program, the Federal Reserve extends nonrecourse loans at the primary credit rate to U.S. depository institutions and bank holding companies to finance their purchases of high-quality asset-backed commercial paper (ABCP) from money market mutual funds. This initiative is intended to assist money funds that hold such paper in meeting demands for redemptions by investors and to foster liquidity in the ABCP markets and broader money markets. Although

the AMLF was initially authorized through January 2009, the Board subsequently extended its operation through October 30, 2009.

### *The Commercial Paper Funding Facility*

On October 7, the Federal Reserve authorized the creation of the Commercial Paper Funding Facility (CPFF) to provide a liquidity backstop to U.S. issuers of commercial paper. The CPFF is intended to improve liquidity in short-term funding markets and thereby increase the availability of credit for businesses and households. The CPFF is currently authorized to purchase commercial paper through October 30, 2009.

Under the CPFF, Federal Reserve credit is provided to a special purpose vehicle (SPV) that, in turn, purchases commercial paper of eligible issuers. The Federal Reserve Bank of New York has committed to lend to the SPV on a recourse basis, with such loans secured by all the assets of the SPV. The SPV purchases from eligible issuers three-month U.S. dollar-denominated commercial paper through the Federal Reserve Bank of New York's primary dealers. Eligible issuers are U.S. issuers of commercial paper, including U.S. issuers with a foreign parent company. The SPV purchases only U.S. dollar-denominated commercial paper (including ABCP) that is rated at least A-1/P-1/F1.

The maximum amount of a single issuer's commercial paper that the SPV may own at any time is the greatest amount of U.S. dollar-denominated commercial paper the issuer had outstanding on any day between January 1 and August 31, 2008. The SPV will not purchase additional commercial paper from an issuer whose total commercial paper outstanding to all investors (including the SPV) equals or exceeds the issuer's limit. Pricing is based on the three-month OIS rate plus fixed spreads. At the time of its registration to use the CPFF, each issuer must pay a facility fee equal to 0.1 percent of the maximum amount of its commercial paper the SPV may own.

### *The Money Market Investor Funding Facility*

On October 21, 2008, the Federal Reserve announced the creation of the Money Market Investor Funding Facility (MMIFF). Under the MMIFF, the Federal Reserve Bank of New York will provide senior secured funding to a series of SPVs to facilitate an industry-supported private-sector initiative to finance the purchase of eligible assets from eligible investors. Eligible assets include U.S. dollar-denominated certificates of deposit and commercial paper issued by highly rated financial institutions and having remaining maturities of 90 days or less. Eligible investors currently include U.S. money market mutual funds and other similar entities. By backstopping the sales of money market instruments in the secondary market, the MMIFF should improve the liquidity of money market investors, thus increasing their ability to meet redemption requests and their willingness to invest in money market instruments. Improved money market conditions enhance the ability of banks and other financial intermediaries to accommodate the credit needs of businesses and households.

The SPVs will purchase eligible money market instruments from eligible investors using financing from the MMIFF and from the issuance of ABCP. The SPVs will issue to the seller of each eligible asset ABCP equal to 10 percent of the asset's purchase price, with the remaining 90 percent of the transaction funded in cash. The Federal Reserve Bank of New York will commit to lend to each SPV 90 percent of the purchase price of each eligible asset. These loans will be on an overnight basis and at the primary credit rate. The loans will be senior to the ABCP, with recourse to the SPV, and secured by all the assets of the SPV. At the time of an SPV's purchase of a debt instrument issued by a financial institution, the debt instruments of that financial institution may not constitute more than 15 percent of the assets of the SPV, except during an initial ramp-up period when the concentration limit may be 20 percent. The SPVs financed by the MMIFF are scheduled to enter a wind-down process on October 30, 2009.

### *The Term Asset-Backed Securities Loan Facility*

On November 25, 2008, the Federal Reserve Board announced plans for the Term Asset-Backed Securities Loan Facility (TALF), a facility that will help market participants meet the credit needs of households and small businesses by supporting the issuance of asset-backed securities (ABS) collateralized by student loans, auto loans, credit card loans, and loans guaranteed by the Small Business Administration. The TALF is designed to increase credit availability and support economic activity by facilitating renewed issuance of consumer and small business ABS at more normal interest rate spreads.

Under the current design of the TALF, the Federal Reserve Bank of New York will lend up to $200 billion on a nonrecourse basis to holders of certain AAA-rated ABS backed by consumer and small business loans.

Eligible securities must have been issued on or after January 1, 2009, and all or substantially all of the credit exposures underlying eligible ABS must be newly or recently originated exposures to U.S.-domiciled obligors. Originators of the credit exposures underlying eligible ABS must have agreed to comply with, or already be subject to, the executive compensation requirements of the Emergency Economic Stabilization Act of 2008.

On February 10, 2009, the Federal Reserve Board announced that it is prepared to undertake a substantial expansion of the TALF. The expansion could increase the size of the TALF to as much as $1 trillion and could broaden the eligible collateral to encompass other types of newly issued AAA-rated asset-backed securities, such as commercial MBS and private-label residential MBS. An expansion of the TALF would be supported by the provision by the Treasury of additional funds from the Troubled Asset Relief Program (TARP).

All U.S. persons who own eligible collateral may participate in the TALF, and each borrower must use a primary dealer to access the TALF. The Federal Reserve Bank of New York will offer a fixed amount of loans under the TALF on a monthly basis. Via a competitive, sealed-bid auction process, the Federal Reserve Bank of New York will award loans in amounts equal to the market value of the ABS less a haircut. The loans will be nonrecourse, will be secured at all times by the ABS, and will have a three-year term, with interest payable monthly. The Treasury, under the TARP, will provide credit protection to the Federal Reserve Bank of New York in connection with the TALF. The facility will cease making new loans on December 31, 2009, unless the Board agrees to extend the facility.

## Direct Purchases of Assets

On September 19, 2008, the Federal Reserve announced that, to support market functioning, the Open Market Trading Desk would begin purchasing federal agency discount notes in the secondary market for the System Open Market Account. These instruments are short-term debt obligations issued by Fannie Mae, Freddie Mac, and the Federal Home Loan Banks. Similar to secondary-market purchases of Treasury securities, purchases of Fannie Mae, Freddie Mac, and Federal Home Loan Bank debt are conducted with the Federal Reserve's primary dealers through a series of competitive auctions.

To help reduce the cost and increase the availability of residential mortgage credit, the Federal Reserve announced on November 25 a program to purchase up to $100 billion in direct obligations of housing-related government-sponsored enterprises (GSEs) and up to $500 billion in MBS backed by Fannie Mae, Freddie Mac, the Federal Home Loan Banks, and Ginnie Mae. Purchases of agency debt obligations began in December, and purchases of MBS began in January.

The program to purchase GSE direct obligations has initially focused on fixed-rate, noncallable, senior benchmark securities issued by Fannie Mae, Freddie Mac, and the Federal Home Loan Banks. Over the course of the program, the Federal Reserve may change the scope of purchasable securities. Purchases will be made through a multiple-price competitive auction process. Primary dealers are eligible to transact directly with the Federal Reserve and are encouraged to submit offers for themselves and their customers.

## Support of Critical Institutions

### *Bear Stearns*

In mid-March of 2008, The Bear Stearns Companies, Inc., a major investment bank and primary dealer, was pushed to the brink of failure after losing the confidence of investors and finding itself without access to short-term financing markets. A bankruptcy filing would have forced the secured creditors and counterparties of Bear Stearns to liquidate underlying collateral, and given the illiquidity of markets, those creditors and counterparties might well have sustained substantial losses. If they had responded to losses or the unexpected illiquidity of their holdings by pulling back from providing secured financing to other firms and by dumping large volumes of illiquid assets on the market, a much broader financial crisis likely would have ensued. Thus, the Federal Reserve judged that a disorderly failure of Bear Stearns would have threatened overall financial stability and would most likely have had significant adverse implications for the U.S. economy.

After discussions with the Securities and Exchange Commission and in close consultation with the Treasury, the Federal Reserve determined that it should invoke emergency authorities to provide special financing to facilitate the acquisition of Bear Stearns by JPMorgan Chase & Co. JPMorgan Chase agreed to purchase Bear Stearns and assume the company's financial obligations. The Federal Reserve agreed to supply term funding, secured by $30 billion in Bear Stearns assets, to facilitate the purchase. A limited liability company, Maiden Lane LLC, was formed to facilitate the arrangements associated with the purchase by acquiring certain assets of Bear Stearns and managing those assets through time to maximize repayment of the

credit extended and to minimize disruption to financial markets. JPMorgan Chase completed the acquisition of Bear Stearns on June 26, and the Federal Reserve extended approximately $29 billion of funding to Maiden Lane on that date.

### *American International Group*

In early September, the condition of American International Group, Inc. (AIG), a large, complex financial institution, deteriorated rapidly. In view of the likely systemic implications and the potential for significant adverse effects on the economy of a disorderly failure of AIG, on September 16, the Federal Reserve Board, with the support of the Treasury, authorized the Federal Reserve Bank of New York to lend up to $85 billion to the firm to assist it in meeting its obligations and to facilitate the orderly sale of some of its businesses. This facility had a 24-month term, with interest accruing on the outstanding balance at a rate of 3-month Libor plus 850 basis points, and was collateralized by all of the assets of AIG and its primary nonregulated subsidiaries. On October 8, the Federal Reserve announced an additional program under which it would lend up to $37.8 billion to finance investment-grade, fixed-income securities held by AIG. These securities had previously been lent by AIG's insurance company subsidiaries to third parties.

In November, the Treasury announced that it would purchase $40 billion of newly issued AIG preferred shares under the TARP, which allowed the Federal Reserve to reduce from $85 billion to $60 billion the total amount available under the credit facility. Further, the interest rate on that facility was reduced to Libor plus 300 basis points, the fee on undrawn funds was reduced to 75 basis points, and the term of the facility was lengthened from two years to five years. The Federal Reserve also announced plans to restructure its lending related to AIG by extending credit to two newly formed limited liability companies. The first, Maiden Lane II LLC, received a $22.5 billion loan from the Federal Reserve and a $1 billion subordinated loan from AIG and purchased residential mortgage-backed securities from AIG. As a result of these actions, the securities lending facility established on October 8 was subsequently repaid and terminated. The second new company, Maiden Lane III LLC, received a $30 billion loan from the Federal Reserve and a $5 billion subordinated loan from AIG and purchased multisector collateralized debt obligations on which AIG has written credit default swap contracts.

### *Citigroup*

Market anxiety about the condition of Citigroup intensified in November 2008, especially in the wake of the firm's announcement that it would lay off 52,000 workers and absorb $17 billion in distressed assets from structured investment vehicles that it sponsored, and concerns about the firm's access to funding mounted. To support financial market stability, the U.S. government on November 23 entered into an agreement with Citigroup to provide a package of capital, guarantees, and liquidity access. As part of the agreement, the Treasury and Federal Deposit Insurance Corporation (FDIC) are providing capital protection against outsized losses on a pool of about $306 billion in residential and commercial real estate and other assets, Citigroup has issued preferred shares to the Treasury and FDIC, and the Treasury has purchased an additional $20 billion in Citigroup preferred stock using TARP funds. In addition and if necessary, the Federal Reserve stands ready to backstop residual risk in the asset pool by providing nonrecourse credit.

### *Bank of America*

Despite the improvement in bank funding markets after year-end, Bank of America also came under intense pressure. In mid-January 2009, the firm reported a $1.8 billion net loss for the fourth quarter, and it was further strained by its merger on January 2 with Merrill Lynch, which reported a fourth-quarter loss of $23 billion on a pretax basis and $16 billion on an after-tax basis. On January 16, Bank of America entered into an agreement with the Treasury, the FDIC, and the Federal Reserve similar to that arranged with Citigroup in November. Under the arrangement, the Treasury and the FDIC provide protection against the possibility of unusually large losses on a pool of approximately $118 billion of financial instruments. In addition, and if necessary, the Federal Reserve will provide nonrecourse credit to Bank of America against this pool of financial instruments. As a fee for this arrangement, Bank of America issued preferred shares to the Treasury and the FDIC.

# Abbreviations

| | |
|---|---|
| ABS | asset-backed securities |
| AMLF | Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility |
| C&I | commercial and industrial |
| CMBS | commercial mortgage-backed securities |
| CPFF | Commercial Paper Funding Facility |
| CRE | commercial real estate |
| FOMC | Federal Open Market Committee; also, the Committee |
| GSE | government-sponsored enterprise |
| Libor | London interbank offered rate |
| MBS | mortgage-backed securities |
| MMIFF | Money Market Investor Funding Facility |
| OIS | overnight index swap |
| PDCF | Primary Dealer Credit Facility |
| SFP | Supplementary Financing Program |
| TAF | Term Auction Facility |
| TALF | Term Asset-Backed Securities Loan Facility |
| TARP | Troubled Asset Relief Program |
| TLGP | Temporary Liquidity Guarantee Program |
| TSLF | Term Securities Lending Facility |

Chairman Bernanke subsequently submitted the following in response to written questions received from Congressman J. Gresham Barrett in connection with the February 25, 2009, hearing before the House Financial Services Committee:

**How do pessimistic statements from public figures affect our chances of economic recovery?**

Although statements from public figures may have an influence on short-run fluctuations in financial markets, the resumption of solid gains in economic activity will depend on a number of more fundamental factors. One critical determinant will be the effectiveness of the policy actions taken by the Federal Reserve, the Treasury, and other government entities in restoring a reasonable degree of financial stability. If financial conditions improve, the economy will be increasingly supported by fiscal and monetary stimulus, the beneficial effects of the steep decline in energy prices since last summer, and the better alignment of business inventories and final sales, as well as the increased availability of credit.

**Has uncertainty from the federal government's actions and statements worsened the economic crisis?**

Our economy and financial markets face significant challenges, and policymakers have responded aggressively. Indeed, actions taken by the Federal Reserve, the Treasury, and other government entities to restore financial stability have helped improve conditions in some financial markets. In particular, strains in short-term funding markets have eased notably since last fall, conditions in the commercial paper market also have improved, mortgage rates have fallen since the Federal Reserve announced its intention to purchase agency debt and agency mortgage-backed securities, and corporate risk spreads have declined somewhat from extraordinarily high levels. Likely spurred by the improvements in pricing and liquidity, issuance of investment-grade corporate bonds has been strong. Going forward, the Federal Reserve will continue to forcefully deploy all the tools at its disposal as long as necessary to support the restoration of financial stability and the resumption of healthy economic growth.

**Why do you think that the stock market reacted so negatively to Secretary Geithner's February 10th speech on the Obama Administration's introduction of the Financial Stability plan?**

It is not possible to determine the reasons for day-to-day fluctuations in equity prices. Ultimately, those prices are determined by the underlying health and prospects for individual firms. As I noted in my previous answer, the actions taken to restore financial stability have helped improve conditions in financial markets. Over time, this improvement should favorably affect the health and prospects of the business sector.

**Would our current economic crisis have been averted if home prices had not dropped? Do you think that the drop in home prices was inevitable?**

History teaches us that booms in asset prices eventually come to an end. As I indicated in the answer to a previous question, the end of housing booms in the United States and other countries and the associated problems in mortgage markets were the proximate sources of collapse of the global credit boom and the subsequent contraction in economic activity. It is, of course, impossible to know with certainty what would have happened if the housing boom had not ended abruptly. But if the housing boom had not ended when it did, some other precipitating factor, instead, could have led to a collapse of the global credit boom and its attendant effects on economic activity.

**In our February 10, 2009 hearing on "An Examination of the Extraordinary Efforts by the Federal Reserve Bank to Provide Liquidity in the Current Financial Crisis," you said: "I think the principal source of the crisis has to do with the huge capital inflows coming from our trade deficit, which overwhelmed our system and made risk management inadequate."**

- **Have high corporate tax rates increased the trade deficit?**

The trade deficit represents the outcome of a multiplicity of factors, including economic activity in the United States and our trading partners, oil and other commodity prices, the value of the dollar, and other influences on spending and competitiveness. Accordingly, it is difficult to identify the effects of specific tax or spending policies on the trade deficit. Higher corporate tax rates could narrow the trade deficit to the extent that they reduce the fiscal deficit and/or reduce investment spending, but they could also widen the deficit were they to reduce the competitiveness of U.S. exporters. On balance, the influence of corporate tax rates on the U.S. trade deficit has probably not been large.

- **What have the federal government and Federal Reserve done that artificially increased the trade deficit?**

I am unaware of any actions taken by the federal government or the Federal Reserve that have *artificially* increased the trade deficit, in the sense of raising the deficit by more than would be consistent with the expected effects of these actions on the economy. Larger fiscal deficits may stimulate the economy and lower national saving rates. Therefore, the fiscal deficits of recent years have likely contributed to the trade deficit, although by how much remains uncertain. It is doubtful that actions taken by the Federal Reserve have boosted the trade deficit, as monetary policy is generally understood to exert offsetting effects on the trade balance. An increase in policy interest rates, for example, will likely depress imports by reducing economic activity, on the one hand, but should depress exports by boosting the value of the dollar, on the other.

- **Do you think that there is an over reliance on U.S. domestic consumption to fuel economic growth? Have recent government actions, such as the passage of the American Recovery and Reinvestment Act, done anything to decrease our reliance on consumer spending?**

It is important to distinguish between near-term and longer-term goals for the economy. Currently, the level of aggregate demand is well below the nation's potential level of economic activity. Accordingly, a near-term goal is to put in place policies that will help to boost the level of aggregate demand (including personal consumption expenditures). The monetary policy and financial stability actions undertaken since August 2007 and the fiscal stimulus packages enacted in 2008 and 2009 have the achievement of this near-term goal as one of their objectives. By supporting public and private spending, these policy actions should boost demand and production in the near term, thereby mitigating the overall loss of employment and income that would otherwise occur.

Over the longer run, however, the nation faces a major challenge from the long period of demographic transition that we are entering. As I have noted elsewhere, if we don't begin soon to provide for the coming demographic transition, the relative burden on future generations may be significantly greater than it otherwise could have been.[1] However, actions that we take today have the potential to mitigate those effects. One such action would be to increase our *national* saving rate--that is, the sum of household, business and government saving. By saving more in this generation, we can reduce the future burden of demographic change. Perhaps the most straightforward way to raise national saving would be to reduce the government's budget deficits over time. To the extent that reduced government borrowing allows more private saving to be used for capital formation or to acquire foreign assets, future U.S. output and income will be enhanced and the future burdens associated with demographic change will be smaller.

- **What effect do you think that the American Recovery and Reinvestment Act will have on the trade deficit?**

Over the past several years, the size of the U.S. trade deficit has been declining, reflecting the fall in the value of the dollar since 2002, robust growth in our trading partners, and, more recently, the downturn in the U.S. economy which has dragged down imports. We would expect that the stimulus provided by the American Recovery and Reinvestment Act would help support the U.S. economy, thus moderating future declines in imports and leading to somewhat larger trade deficits than would occur in the absence of the stimulus. Given the challenges faced by the economy, the need to support aggregate spending is clear. Even with the stimulus package, both imports and the trade deficit will likely remain well below their levels in recent years for some time.

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[1] Ben S. Bernanke, "The Coming Demographic Transition: Will We Treat Future Generations Fairly?," speech before The Washington Economic Club, Washington, D.C., October 4, 2006.

Chairman Bernanke subsequently submitted the following in response to written questions received from Congressman Keith Ellison in connection with the February 25, 2009, hearing before the House Financial Services Committee:

- **Chairman Bernanke, I have heard from retailers in my state who offer consumers the opportunity to make purchases using "deferred interest" plans. Can you please clarify for me the impact of the final UDAP rule issued last December and its potential impact on consumers and businesses in my state that use "no interest" financing?**

- **Chairman Bernanke, I understand that the rule makes changes to so-called "interest-free" or "6-month same as cash" financing, which some retailers fear may adversely affect that kind of promotion. Can you explain what changes you made, and how retailers might continue to make this kind of promotion available within the confines of the rule?**

In the final rule addressing unfair and deceptive credit card practices, the Board, the Office of Thrift Supervision (OTS), and the National Credit Union Administration (NCUA) (collectively, the Agencies) expressed concern regarding deferred interest programs that are marketed as "no interest" but charge the consumer interest if purchases made under the program are not paid in full by a specified date or if the consumer violates the account terms prior to that date (which could include a "hair trigger" violation such as paying one day late). In particular, the Agencies noted that, although these programs provide substantial benefits to consumers who pay the purchases in full prior to the specified date, the "no interest" marketing claims may cause other consumers to be unfairly surprised by the increase in the cost of those purchases. Accordingly, the Agencies concluded that prohibiting deferred interest programs as they are currently marketed and structured would improve transparency and enable consumers to make more informed decisions regarding the cost of using credit.

The Agencies specifically stated, however, that the final rule does not prohibit institutions from offering promotional programs that provide similar benefits to consumers but do not raise concerns about unfair surprise. For example, the Agencies noted that an institution could offer a program where interest is assessed on purchases at a disclosed rate for a period of time but the interest charged is waived or refunded if the principal is paid in full by the end of that period.

The Board understands that the distinction in the final rule between "deferred interest" and "waived or refunded interest" has caused confusion regarding how institutions should structure these types of promotional programs where the consumer will not be obligated to pay interest that accrues on purchases if those purchases are paid in full by a specified date. For this reason, the Board is consulting with the OTS and NCUA regarding the need to clarify that the focus of the final rule is not on the technical aspects of these promotional programs (such as whether interest is deferred or waived) but instead on whether the programs are disclosed and structured in a way that consumers will not be unfairly surprised by the cost of using the programs. If the Agencies determine that clarifications to the final rule are necessary, those changes will assist institutions in understanding and complying with the new rules and should not reduce protections for consumers.

Chairman Bernanke subsequently submitted the following in response to written questions received from Congressman Bill Foster in connection with the February 25, 2009, hearing before the House Financial Services Committee:

**Q1a. What are your contingency plans for dealing with deflation if it develops?**

The Federal Reserve has eased monetary policy very aggressively over recent months and has implemented and expanded a number of liquidity and asset purchase programs to address the strains in financial markets and to foster an improvement in the economic outlook. As always, our policy actions going forward will be guided by our statutory objectives of maximum employment and stable prices. A decline in inflation to very low levels, possibly even including outright deflation, could lead to a decline in inflation expectations and a corresponding increase in real interest rates. Such an increase in real interest rates would further dampen aggregate spending and exacerbate disinflationary pressures. To guard against such adverse outcomes, the Federal Reserve will continue to aggressively employ all available tools to ease credit market conditions, counter disinflationary forces, and encourage and support sustained economic growth.

**Q.1b. Along these lines, should Congress take steps to ensure that numerous benefit programs indexed to inflation be protected from deflation?**

The second part of your question raises the concern of whether beneficiaries will see their benefits decline in the event of deflation. While every benefit program has its own particular indexation provisions, under current law social security benefits would not decline in the event of deflation. In particular, the cost-of-living-adjustment (COLA) for social security payments at the beginning of next year will be linked to the percent change in consumer price index for urban wage earners and clerical workers (CPI-W) from the third quarter of 2008 to the third quarter of 2009. However, the provisions of social security are such that this COLA cannot be negative. So, if the CPI-W declines over that period, next year's benefits would not be adjusted--either up or down--for changes in the cost of living. In addition, when the CPI-W began increasing in subsequent years, the COLA would remain zero until the CPI-W had increased enough to make up for any earlier declines.

While the March Blue Chip consensus forecast anticipates that the CPI will decline through the four quarters ending in the third quarter of this year, the Blue Chip also points to increases in the CPI in subsequent years. (The Blue Chip forecasts the consumer price index for all urban consumers (CPI-U), which is closely related to the CPI-W.) If these forecasts prove correct, the indexation provisions described above would come into play, but they would apply for a relatively short period of time.

Were deflation to be more persistent, the indexation provisions for social security could raise complex budgetary and fairness issues. For example, if the cost of living is actually declining but benefits are not adjusting in response to that decline, then the real value of benefits would be rising during that period, an increase in real purchasing power that may not be enjoyed by all other citizens. On the other hand, if any such deflation occurred in the context of

economic weakness, the additional purchasing power would be a source of economic stimulus. As for the best path for the Congress to follow with regard to these issues, during my tenure as Chairman of the Federal Reserve Board I have, as you know, avoided taking a position on explicit issues of this sort. I believe that these are decisions that must be made by the Congress, the Administration, and the American people.

**Q.2. In retrospect, how would you have identified the asset bubble in both housing and equities?**

Let me begin by addressing your question with regard to the equity market. At the onset of the financial crisis in mid-2007, there was no obvious mispricing of equities. Standard valuation measures suggested that equities were priced in a manner that was consistent with historic norms. Of course, stock prices have plummeted since then. But that drop need not imply that stock prices were overvalued based on the information available at that time. Indeed, I would attribute much of the decline in stock prices to the steep drop in corporate profits as the economy worsened. A well-functioning stock market incorporates new information as it becomes available, and I believe that is what happened over the past eighteen months. In my view, the recent experience provides no guidance for detecting equity price bubbles because no bubble existed.

In the housing market, the situation was somewhat different. There were concerns about the sharp rise in house prices before mid-2007, and in retrospect, it is clear that a price bubble had developed, fueled by the broader global credit boom. Subsequently, the drop in house prices and the shift to much tighter credit conditions have had serious consequences for our financial system and economy. The Federal Reserve has acted aggressively to deal with this fallout and will continue to do so.

Recent developments highlight the need for appropriate reform of our system of financial regulation. Such reform would help reduce the likelihood of another house price bubble and, more generally, would contribute to the stability of the national and global economy.

**Q.3. Do you have a clear understanding of what the proposed mortgage cram-down legislation will have on the balance sheets of life insurance companies, banks, and pension funds?**

Providing bankruptcy judges with the ability to adjust mortgage terms and reduce outstanding principal should result in more sustainable mortgage obligations for some borrowers and thus help reduce preventable foreclosures. However, among the possible disadvantages of such an approach, some private-label mortgage-backed securities (MBS) contain so-called "bankruptcy carve-out" provisions requiring that losses stemming from bankruptcies be shared across the different tranches of the securities. The implication is that the investors holding the AAA-rated tranches would bear most of the losses from principal write-downs allowed by the legislation because they account for most of the outstanding deals. Large holders of AAA-rated MBS--including life insurance companies, banks, and pension funds as well as the housing

GSEs--might thus face material losses if bankruptcy judges were permitted to reduce the principal amount of mortgages. Such an outcome might further de-stabilize conditions in financial markets.

H.R. 1106 includes a provision that would disregard such bankruptcy carve-out provisions in the agreements governing relevant private-label MBS. If judged to be constitutional, such a provision has the potential to reduce the bankruptcy-related losses that would be taken by holders of the AAA-rated tranches of these securities if bankruptcy cram-down legislation were enacted.

**Q.4. You mentioned your desire to minimize government involvement in a regulatory regime for unwinding future failures of systemically important institutions. Is there an example of a successful protocol in place in other countries that this could be modeled on?**

A number of systemically important financial institutions located in industrialized nations have failed in the last few decades. In every case, the resolution of the failure involved actions by the local government that were developed on-the-fly and that included use of public funds, government guarantees of liabilities of the failed institution, or both. The most prominent protocols that exist in law today, those specified in the United States in the 1991 FDIC Improvement Act (FDICIA) and in Japan in the 1998 Financial Reconstruction Law and related subsequent legislation, were both put in place in the midst of crises. The Japanese approach was put in place in part to help authorities address the impending failure of the Long Term Credit Bank (LTCB). It minimized systemic fallout associated with LTCB's substantial international derivatives exposures by using public funds to support the honoring and early closeout of LTCB's derivatives obligations.

Both the Japanese and U.S. approaches focus on banks. Authority to deal with distressed, systemically important nonbanks is limited or non-existent, depending on the nation and the type of institution. Going forward, one way to minimize government support, taxpayer exposure, and economic disruption is to establish legal authorities that enable orderly, predictable resolutions and unwinds of nonbank financial institutions. Provision for flexibility to take into account the special circumstances of major financial institutions is also needed (FDICIA's systemic risk exception is an example). Sometimes, offering some support or guarantees in the short run may lead to smaller costs to the taxpayer and the economy as a whole in the long run. Any government support should be provided in a manner that is transparent and subject to public oversight.

**Q.5. You are making a number of historically important decisions on the fly that will be studied by generations of economic historians. If I ask you to put back on your hat as a former professor, do you believe that an adequate archive of your deliberations and the data is being preserved so that "lessons learned" can be adequately extracted?**

The Federal Reserve follows comprehensive records retention policies that should provide historians with a good picture of the policy deliberations. In addition, the Board has a full staff of records management professionals who are responsible for overseeing and maintaining records of the Board in accordance with federal law.

The Federal Open Market Committee keeps a lightly edited transcript of each of its meetings, so the full policy discussion itself is preserved. Similarly, the substantive staff memos and other background documents (for example, the Greenbook and the Bluebook) that are circulated to the Committee in preparation for each meeting are also retained permanently, as are any materials distributed to the members during the meeting.

The public release of information from an FOMC meeting begins with the statement that is issued after each regularly scheduled meeting, which includes information on the policy decision and the individual votes cast. Three weeks later, the minutes are released; they contain a summary of the economic and financial information available to the Committee at the time of the meeting and a summary of the Committee's discussion. After a lag of about five years, FOMC meeting transcripts are released to the public. Any particularly sensitive information is redacted before release, but such deletions have been relatively few. Greenbooks, Bluebooks, and other documents are also made available. Many of these documents are posted on the Federal Reserve Board's website at http://www.federalreserve.gov/monetarypolicy/fomc.htm.

At present, FOMC meetings are being organized as joint meetings with the Board of Governors, and in the case of those Board meetings, the same classes of documents are being preserved as for other FOMC meetings. For Federal Reserve Board meetings more generally, staff memos and other background documents that are either circulated to the Board in preparation for the meetings or distributed at the meetings, including recommendations and rationales for possible Board actions, are also retained permanently. However, in some cases Board meetings must be scheduled on very short notice, and in such cases there may be little or no documentation. In recognition of the widespread interest in its actions, the Board recently issued a press release and posted on its public website the minutes of its meetings in 2008 concerning Federal Reserve liquidity facilities and other matters related to the financial crisis.

Chairman Bernanke subsequently submitted the following in response to written questions received from Congressman Erik Paulsen in connection with the February 25, 2009, hearing before the House Financial Services Committee:

- **Chairman Bernanke, I have heard from retailers in my state who offer consumers the opportunity to make purchases using "deferred interest" plans. Can you please clarify for me the impact of the final UDAP rule issued last December and its potential impact on consumers and businesses in my state that use "no interest" financing? I understand the impact to be very significant and would appreciate the Fed working with retailers to clarify that "no interest" financing can continue to be offered to consumers albeit with revised disclosures and marketing.**

- **Chairman Bernanke, I would like more clarification on the UDAP rule's impact on the ability of consumers to have access to "no interest" financing. I understand from retailers on my state that "no interest" is very popular especially for the purchase of big ticket items like home improvements, appliances and computers. Of course, I support the Fed making sure these type of financing options are fairly and clearly disclosed so that people understand the terms of the financing (i.e., they have to make monthly payments and pay off the balance by the end of the term) but I am concerned that the UDAP rule may limit the ability of retailers to provide this financing to customers. I would appreciate the Fed and other regulators clarifying this issue and providing me with an update as soon as possible.**

In the final rule addressing unfair and deceptive credit card practices, the Board, the Office of Thrift Supervision (OTS), and the National Credit Union Administration (NCUA) (collectively, the Agencies) expressed concern regarding deferred interest programs that are marketed as "no interest" but charge the consumer interest if purchases made under the program are not paid in full by a specified date or if the consumer violates the account terms prior to that date (which could include a "hair trigger" violation such as paying one day late). In particular, the Agencies noted that, although these programs provide substantial benefits to consumers who pay the purchases in full prior to the specified date, the "no interest" marketing claims may cause other consumers to be unfairly surprised by the increase in the cost of those purchases. Accordingly, the Agencies concluded that prohibiting deferred interest programs as they are currently marketed and structured would improve transparency and enable consumers to make more informed decisions regarding the cost of using credit.

The Agencies specifically stated, however, that the final rule does not prohibit institutions from offering promotional programs that provide similar benefits to consumers but do not raise concerns about unfair surprise. For example, the Agencies noted that an institution could offer a program where interest is assessed on purchases at a disclosed rate for a period of time but the interest charged is waived or refunded if the principal is paid in full by the end of that period.

The Board understands that the distinction in the final rule between "deferred interest" and "waived or refunded interest" has caused confusion regarding how institutions should structure these types of promotional programs where the consumer will not be obligated to pay

interest that accrues on purchases if those purchases are paid in full by a specified date. For this reason, the Board is consulting with the OTS and NCUA regarding the need to clarify that the focus of the final rule is not on the technical aspects of these promotional programs (such as whether interest is deferred or waived) but instead on whether the programs are disclosed and structured in a way that consumers will not be unfairly surprised by the cost of using the programs. If the Agencies determine that clarifications to the final rule are necessary, those changes will assist institutions in understanding and complying with the new rules and should not reduce protections for consumers.

Insert page 97, following line 2323 (2-25-09 MPR hearing)

*Table 4*

RECIPROCAL CURRENCY ARRANGEMENTS

Millions of U S Dollars

| Institution | Amount of Facility | Outstanding as of March 31, 2009 |
|---|---|---|
| | Federal Reserve System Open Market Account (SOMA) | |
| Bank of Canada | 2,000 | 0 |
| Banco de México | 3,000 | 0 |
| European Central Bank[a] | Unlimited | 165,717 |
| Swiss National Bank[a] | Unlimited | 7,318 |
| Bank of Japan[a] | Unlimited | 61,025 |
| Bank of Canada[a] | 30,000 | 0 |
| Bank of England[a] | Unlimited | 14,963 |
| Danmarks Nationalbank[a] | 15,000 | 5,270 |
| Reserve Bank of Australia[a] | 30,000 | 9,575 |
| Sveriges Riksbank[a] | 30,000 | 23,000 |
| Norges Bank[a] | 15,000 | 7,050 |
| Reserve Bank of New Zealand[a] | 15,000 | 0 |
| Bank of Korea[a] | 30,000 | 16,000 |
| Banco Central do Brasil[a] | 30,000 | 0 |
| Banco de México[a] | 30,000 | 0 |
| Monetary Authority of Singapore[a] | 30,000 | 0 |
| Total | Unlimited | 309,917 |
| | U S Treasury Exchange Stabilization Fund (ESF) | |
| Banco de México | 3,000 | 0 |
| Total | 3,000 | 0 |

[a] Temporary swap arrangement