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FEDERAL RESERVE'S FIRST MONETARY POLICY REPORT FOR 2010

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

ON

RECEIVING THE FEDERAL RESERVE'S SEMI-ANNUAL MONETARY REPORT TO THE CONGRESS AND DISCUSSING MONETARY POLICY AND THE ECONOMIC OUTLOOK

FEBRUARY 25, 2010

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COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

C O N T E N T S

THURSDAY, FEBRUARY 25, 2010

FEDERAL RESERVE'S FIRST MONETARY POLICY REPORT FOR 2010

THURSDAY, FEBRUARY 25, 2010

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Committee met at 9:08 a.m. in room SD–538, Dirksen Senate Office Building, Senator Christopher J. Dodd, Chairman of the Committee, presiding.

OPENING STATEMENT OF CHAIRMAN CHRISTOPHER J. DODD

Chairman DODD. The Committee will come to order.

Let me welcome all who are here this morning for the Committee hearing, the hearing on the semiannual monetary report to Congress by the Chairman of the Federal Reserve, and we welcome you once again, Mr. Chairman, to the Banking Committee. I will make a brief opening statement, turn to Senator Shelby for any comments he may make, and then we will turn right to you for your opening comments and get to some questioning. But we thank you once again for joining us here this morning.

Today, as you testify before us, Mr. Chairman, it is worth taking a moment to recognize that our economy is showing signs of emerging from this recession. During the last two quarters, GDP has shown positive growth, as has gross private domestic investment, and financial markets have stabilized enough to allow the Fed to wind down nearly all the liquidity facilities it established in response to this crisis.

But that does not mean, of course, that our economy is out of the woods, as we all know. And more importantly, it does not mean that the situation of working families has improved dramatically either. Households and small businesses dependent on banks for financing continue to have trouble getting the loans that they need. Commercial real estate losses continue to mount, and combined with losses on home mortgages, they are making the credit crunch even worse.

Outside of securities guaranteed by the Federal Government, the residential and commercial markets for mortgage-backed securities are practically non-existent. Foreclosures continue to plague our communities at greater and greater rates, and the large inventory of foreclosed homes continues to suppress the housing market and discouraging new construction.

And worst of all, Mr. Chairman, the job market continues to suffer from the losses incurred during the recession. We have lost 8.4 million jobs since December of 2007. The unemployment rate stands at 9.7 percent, although many of us would argue here that that number is actually vastly in excess of that in many areas of the country. And it is widely expected that it will remain high for several years to come. An astonishing 6.3 million American workers have been out of a job for a half a year or more, and that is a record in our Nation.

The state of our economy as a whole may be improving, but if we are talking about the situation of ordinary American families, I think I can sum up this recovery in three words: Not good enough. I think most would agree.

The longer we go without resolving these problems, the worse off, of course, we all will be. Unemployed Americans will continue to lose their health insurance and their homes. Their skills will begin to deteriorate, leaving us less competitive in the global economy. Those who do have jobs will see their wages stagnate. Our country will suffer as a result.

This Congress has a role to play in putting people back to work, and we have a responsibility to put protections in place to make sure that a crisis like this never threatens our financial system again. Our Committee has made important progress toward that end, and my hope is that we will have a financial reform bill ready in the coming days.

Mr. Chairman, you also have a role to play in all of this, as you know, and I have been impressed by your leadership, keeping the American economy from falling into the abyss, and you deserve a great deal of credit, in my view, for having contributed so significantly to that result. But now it is time as well, as I am sure you will agree, for you to show the same kind of leadership in helping us and American families along with those of us on this side of the dais to achieve the same fate, to come out of this abyss and get back on our feet again.

So I look forward to working with you in the coming days—I know all of my colleagues will—work on your ideas and how monetary policy can help our constituents emerge from this recession.

Now, as many of my colleagues know, having filled in the seat for Ted Kennedy as Chairman of the Health, Education, and Labor Committee, I have another place to be this morning—at the White House—to sit there and resolve health care, which I am confident we are going to do this morning, I would say to my colleagues. I do not see any smiles around the table on hearing that prediction. And so I am going to be leaving shortly, but I want to take—I am going to abuse my chairmanship for a minute. I am going to ask you a question because I will not get a chance in the normal process.

In light of what is happening in Greece, Mr. Chairman, I wanted to raise an issue because matters have arisen, and I will raise this and you can either respond quickly to it and I will go right to Senator Shelby. But if I indulge my colleagues by doing this—I have not done this before, but given that I have got the problems this morning where I have to be.

The debt crisis, Mr. Chairman, in Greece is shedding light on the role of derivatives in the financial markets. According to news reports this morning and over the last several days, banks and hedge funds are using credit default swaps to bet that Greece will default on its debt. The rising price of these contracts contributes to an atmosphere of crisis, making it even more difficult for the Greek Government, in my opinion, to borrow. Since there is no requirement that purchasers of credit default swaps actually own any of the underlying debt, we have a situation in which major financial institutions are amplifying a public crisis for what would appear to be private gain.

I want to ask you here whether or not you think there ought to be limits on the use of credit default swaps to prevent the intentional creation of runs against governments. Do you have any quick comments on that?

Mr. BERNANKE. Yes, Senator. I just want to say first of all that we are looking into a number of questions related to Goldman Sachs and other companies and their derivatives arrangements with Greece and on this issue as well. As you know, credit default swaps are properly used as hedging instruments.

Chairman DODD. I agree.

Mr. BERNANKE. The SEC, of course, has been interested in this issue. Obviously, using these instruments in a way that intentionally destabilizes a company or a country is counterproductive, and I am sure the SEC will be looking into that. We will certainly be evaluating what we can learn from the activities of the holding companies that we supervise here in the United States.

Chairman DODD. Well, let me just make the request of you here, and we will make the similar request to the SEC. I am sure all of us on this Committee would like to hear very quickly what the response is going to be, if any, either from your or recommendations you would make as well as from the SEC. I will make that formal request this morning. I think it is a critical issue for all of us.

Senator Shelby.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Thank you. Thank you, Chairman Dodd. Welcome to the Committee, Chairman Bernanke, again.

As our financial markets began to show signs of improvement, many of the Fed's temporary lending facilities have been allowed to expire, and monetary policy has begun to normalize. And while use of the temporary lending facilities wane, expanded purchases by the Fed of Federal agency debt, mortgage-backed securities, and longer-term Treasury securities have kept the size of the Fed's balance sheet unusually large.

As of last week, it is my understanding that the banks had over $1.2 trillion in reserve balances at Federal Reserve banks. That is more than 100 times the average level of such balances in 2006.

This morning I am interested in hearing, Mr. Chairman, plans for reducing the size of the Fed's balance sheet, withdrawing extraordinary liquidity support from the banking system, and continuing the normalization of monetary policy. In addition, I believe, Mr. Chairman, you should tell us how the Fed plans to use interest on reserves as a monetary policy tool and how you intend to use reverse repurchase agreements to address reserves in the banking system.

Finally, the Committee, I believe, should gain a better understanding of how the Fed and the Treasury Department intend to manage the Fed's balance sheet, and I think this is especially relevant given Tuesday's announcement by the Treasury that it anticipates selling securities and injecting around $200 billion into the Department's supplemental financing account at the Fed over the next 2 months.

Mr. Chairman, while there are signs of improvement in the economy, conditions remain weak, especially in labor markets. Too many Americans are unemployed or underemployed. Because credible plans for fiscal balance and monetary policy are essential for economic recovery, we need to have transparency and clarity about the Federal Reserve's plans. My hope this morning, Mr. Chairman, is that you will provide that clarity.

Thank you.

Chairman DODD. Mr. Chairman, the floor is yours.

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

Mr. BERNANKE. Thank you. Chairman Dodd, Ranking Member Shelby, and other members of the Committee, I am pleased to present the Federal Reserve's semiannual Monetary Policy Report to the Congress. I will begin today with some comments on the outlook for the economy and for monetary policy and then touch briefly on several important issues.

Although the recession officially began more than 2 years ago, U.S. economic activity contracted particularly sharply following the intensification of the global financial crisis in the fall of 2008. Concerted efforts by the Federal Reserve, the Treasury Department, and other U.S. authorities to stabilize the financial system, together with highly stimulative monetary and fiscal policies, helped arrest the decline and are supporting a nascent economic recovery. Indeed, the U.S. economy expanded at about a 4-percent annual rate during the second half of last year. A significant portion of that growth, however, can be attributed to the progress that firms made in working down unwanted inventories of unsold goods, which left them more willing to increase production. As the impetus provided by the inventory cycle is temporary, and as the fiscal support for economic growth likely will diminish later this year, a sustained recovery will depend on continued growth in private sector final demand for goods and services.

Private final demand does seem to be growing at a moderate pace, buoyed in part by a general improvement in financial conditions. In particular, consumer spending has recently picked up, reflecting gains in real disposable income and household wealth and tentative signs of stabilization in the labor market. Business investment in equipment and software has risen significantly. And international trade—supported by a recovery in the economies of many of our trading partners—is rebounding from its deep contraction of a year ago. However, starts of single-family homes, which rose noticeably this past spring, have recently been roughly flat, and commercial construction is declining sharply, reflecting poor fundamentals and continued difficulty in obtaining financing.

The job market has been especially hard hit by the recession, as employers reacted to sharp sales declines and concerns about credit availability by deeply cutting their workforces in late 2008 and in

2009. Some recent indicators suggest that the deterioration in the labor market is abating: Job losses have slowed considerably, and the number of full-time jobs in manufacturing rose modestly in January. Initial claims for unemployment insurance have continued to trend lower, and the temporary services industry, often considered a bellwether for the employment outlook, has been expanding steadily since October. Notwithstanding these positive signs, the job market remains quite weak, with the unemployment rate near 10 percent and job openings scarce. Of particular concern, because of its long-term implications for workers' skills and wages, is the increasing incidence of long-term unemployment; indeed, more than 40 percent of the unemployed have been out of work for 6 months or more, nearly double the share of a year ago.

Increases in energy prices resulted in a pickup in consumer price inflation in the second half of last year, but oil prices have flattened out over recent months, and most indicators suggest that inflation will likely remain subdued for some time. Slack in labor and product markets has reduced wage and price pressures in most markets, and sharp increases in productivity have further reduced producers' unit labor costs. The cost of shelter, which receives a heavy weight in consumer price indexes, is rising very slowly, reflecting high vacancy rates. In addition, according to most measures, longer-term inflation expectations have remained relatively stable.

The improvement in financial markets that began last spring continues. Conditions in short-term funding markets have returned to near pre-crisis levels. Many (mostly larger) firms have been able to issue corporate bonds or new equity and do not seem to be hampered by a lack of credit. In contrast, bank lending continues to contract, reflecting both tightened lending standards and weak demand for credit amid uncertain economic prospects.

In conjunction with the January meeting of the FOMC, Board members and Reserve Bank presidents prepared projections for economic growth, unemployment, and inflation for the years 2010 through 2012 and over the longer run. The contours of these forecasts are broadly similar to those I reported to the Congress last July. FOMC participants continue to anticipate a moderate pace of economic recovery, with economic growth of roughly 3 to 3½ percent in 2010 and 3½ to 4½ percent in 2011. Consistent with moderate economic growth, participants expect the unemployment rate to decline only slowly, to a range of roughly 6½ to 7½ percent by the end of 2012, still well above their estimate of the long-run sustainable rate of about 5 percent. Inflation is expected to remain subdued, with consumer prices rising at rates between 1 and 2 percent in 2010 through 2012. In the longer term, inflation is expected to be between 1¾ and 2 percent, the range that most FOMC participants judge to be consistent with the Federal Reserve's dual mandate of price stability and maximum employment.

Over the past year, the Federal Reserve has employed a wide array of tools to promote economic recovery and preserve price stability. The target for the Federal funds rate has been maintained at a historically low range of 0 to ¼ percent since December 2008. The FOMC continues to anticipate that economic conditions—including low rates of resource utilization, subdued inflation trends, and stable inflation expectations—are likely to warrant exceptionally low levels of the Federal funds rate for an extended period.

To provide support to mortgage lending and housing markets and to improve overall conditions in private credit markets, the Federal Reserve is in the process of purchasing $1.25 trillion of agency mortgage-backed securities and about $175 billion of agency debt. We have been gradually slowing the pace of these purchases in order to promote a smooth transition in markets and anticipate that these transactions will be completed by the end of March. The FOMC will continue to evaluate its purchases of securities in light of the evolving economic outlook and conditions in financial markets.

In response to the substantial improvements in the functioning of most financial markets, the Federal Reserve is winding down the special liquidity facilities it created during the crisis. On February 1, a number of these facilities, including credit facilities for primary dealers, lending programs intended to help stabilize money market mutual funds and the commercial paper market, and temporary liquidity swap lines with foreign central banks, were all allowed to expire.

The only remaining lending program for multiple borrowers created under the Federal Reserve's emergency authorities, is the Term Asset-Backed Securities Loan Facility, or TALF, and it is scheduled to close on March 31 for loans backed by all types of collateral except for newly issued commercial mortgage-backed securities, and it will close on June 30 for loans backed by newly issued CMBS.

In addition to closing its special facilities, the Federal Reserve is normalizing its lending to commercial banks through the discount window. The final auction of discount window funds to depositories through the Term Auction Facility, which was created in the early stages of the crisis to improve the liquidity of the banking system, will occur on March 8. Last week, we announced the maximum term of discount window loans, which was increased to as much as 90 days during the crisis, would be returned to overnight for most banks, as it was before the crisis erupted in August 2007.

To discourage banks from relying on the discount window rather than private funding markets for short-term credit, last week we also increased the discount rate by 25 basis points, raising the spread between the discount rate and the top of the target range for the Federal funds rate to 50 basis points. These changes, like the closure of most of the special lending facilities earlier this month, are in response to the improved functioning of financial markets, which has reduced the need for extraordinary assistance from the Federal Reserve. These adjustments are not expected to lead to tighter financial conditions for households and businesses and should not be interpreted as signaling any change in the outlook for monetary policy, which remains about the same as it was at the time of the January meeting of the FOMC.

Although the Federal funds rate is likely to remain exceptionally low for an extended period, as the expansion matures, the Federal Reserve will at some point need to begin to tighten monetary conditions to prevent the development of inflationary pressures. Notwithstanding the substantial increase in the size of its balance sheet associated with its purchases of Treasury and agency securities, we are confident that we have the tools we need to firm the stance of monetary policy at the appropriate time.

Most importantly, in October 2008 the Congress gave statutory authority to the Federal Reserve to pay interest on banks' holdings of reserve balances at Federal Reserve banks. By increasing the interest rate on reserves, the Federal Reserve will be able to put significant upward pressure on all short-term interest rates. Actual and prospective increases in short-term interest rates will be reflected in turn in longer-term interest rates and in financial conditions more generally.

The Federal Reserve has also been developing a number of additional tools to reduce the large quantity of reserves held by the banking system, which will improve the Federal Reserve's control of financial conditions by leading to a tighter relationship between the interest rate paid on reserves and other short-term interest rates. Notably, our operational capacity for conducting reverse repurchase agreements, a tool that the Federal Reserve has historically used to absorb reserves from the banking system, is being expanded so that such transactions can be used to absorb large quantities of reserves. The Federal Reserve is also currently refining plans for a term deposit facility that could convert a portion of depository institutions' holdings of reserve balances into deposits that are less liquid and could not be used to meet reserve requirements. In addition, the FOMC has the option of redeeming or selling securities as a means of reducing outstanding bank reserves and applying monetary restraint. Of course, the sequencing of steps and the combination of tools that the Federal Reserve uses as it exits from its currently very accommodative policy stance will depend on economic and financial developments. I provided more discussion of these options and possible sequencing in a recent testimony.

The Federal Reserve is committed to ensuring that the Congress and the public have all the information needed to understand our decisions and to be assured of the integrity of our operations. Indeed, on matters related to the conduct of monetary policy, the Federal Reserve is already one of the most transparent central banks in the world, providing detailed records and explanations of its decisions. Over the past year, the Federal Reserve also took a number of steps to enhance the transparency of its special credit and liquidity facilities, including the provision of regular, extensive reports to the Congress and the public; and we have worked closely with the GAO, the SIGTARP, the Congress, and private sector auditors on a range of matters relating to these facilities.

While the emergency credit and liquidity facilities were important tools for implementing monetary policy during the crisis, we understand that the unusual nature of those facilities creates a special obligation to assure the Congress and the public of the integrity of their operation. Accordingly, we would welcome a review by the GAO of the Federal Reserve's management of all facilities created under emergency authorities. In particular, we would support legislation authorizing the GAO to audit the operational integrity, collateral policies, use of third-party contractors, accounting, financial reporting, and internal controls of these special liquidity and credit facilities. The Federal Reserve will, of course, cooperate fully and actively in all reviews. We are also prepared to support legislation that would require the release of the identities of the firms that participated in each special facility after an appropriate delay. It is important that the release occur after a lag that is sufficiently long that investors will not view an institution's use of one of these facilities as a possible indication of ongoing financial problems, thereby undermining market confidence in the institution or discouraging use of any future facility that might become necessary to protect the U.S. economy. An appropriate delay would also allow firms adequate time to inform investors through annual reports and other public documents of their use of Federal Reserve facilities.

Looking ahead, we will continue to work with the Congress in identifying approaches for enhancing the Federal Reserve's transparency that are consistent with our statutory objectives of fostering maximum employment and price stability. In particular, it is vital that the conduct of monetary policy continue to be insulated from short-term political pressures so that the FOMC can make policy decisions in the longer-term economic interests of the American people. Moreover, the confidentiality of discount window lending to individual depository institutions must be maintained so that the Federal Reserve continues to have effective ways to provide liquidity to depository institutions under circumstances where other sources of funding are not available. The Federal Reserve's ability to inject liquidity into the financial system is critical for preserving financial stability and for supporting depositories' key role in meeting the ongoing credit needs of firms and households.

Strengthening our financial regulatory system is essential for the long-term economic stability of the Nation. Among the lessons of the crisis are the crucial importance of macroprudential regulation that is, regulation and supervision aimed at addressing risks to the financial system as a whole—and the need for effective consolidated supervision of every financial institution that is so large or interconnected that its failure could threaten the functioning of the entire financial system.

The Federal Reserve strongly supports the Congress' ongoing efforts to achieve comprehensive financial reform. In the meantime, to strengthen the Federal Reserve's oversight of banking organizations, we have been conducting an intensive self-examination of our regulatory and supervisory responsibilities and have been actively implementing improvements. For example, the Federal Reserve has been playing a key role in international efforts to toughen capital and liquidity requirements for financial institutions, particularly systemically critical firms, and we have been taking the lead in ensuring that compensation structures at banking organizations provide appropriate incentives without encouraging excessive risk taking.

The Federal Reserve is also making fundamental changes in its supervision of large, complex bank holding companies, both to improve the effectiveness of consolidated supervision and to incorporate a macroprudential perspective that goes beyond the traditional focus on safety and soundness of individual institutions. We are overhauling our supervisory framework and procedures to improve coordination within our own supervisory staff and with other supervisory agencies and to facilitate more integrated assessments of risks within each holding company and across groups of companies.

Last spring the Federal Reserve led the successful Supervisory Capital Assessment Program, popularly known as the bank stress tests. An important lesson of that program was that combining onsite bank examinations with a suite of quantitative and analytical tools can greatly improve comparability of the results and better identify potential risks. In that spirit, the Federal Reserve is also in the process of developing an enhanced quantitative surveillance program for large bank holding companies. Supervisory information will be combined with firm-level, market-based indicators and aggregate economic data to provide a more complete picture of the risks facing these institutions and the broader financial system. Making use of the Federal Reserve's unparalleled breadth of expertise, this program will apply a multidisciplinary approach that involves economists, specialists in particular financial markets, payments systems experts, and other professionals, as well as bank supervisors.

The recent crisis has also underscored the extent to which direct involvement in the oversight of banks and bank holding companies contributes to the Federal Reserve's effectiveness in carrying out its responsibilities as a central bank, including the making of monetary policy and the management of the discount window. But most important, as the crisis has once again demonstrated, the Federal Reserve's ability to identify and address diverse and hard-to-predict threats to financial stability depends critically on the information, expertise, and powers that it has by virtue of being both a bank supervisor and a central bank.

The Federal Reserve continues to demonstrate its commitment to strengthening consumer protections in the financial services arena. Since the time of the previous Monetary Policy Report in July, the Federal Reserve has proposed a comprehensive overhaul of the regulations governing consumer mortgage transactions, and we are collaborating with the Department of Housing and Urban Development to assess how we might further increase transparency in the mortgage process. We have issued rules implementing enhanced consumer protections for credit card accounts and private student loans as well as new rules to ensure that consumers have meaningful opportunities to avoid overdraft fees. In addition, the Federal Reserve has implemented an expanded consumer compliance supervision program for nonbank subsidiaries of bank holding companies and foreign banking organizations.

More generally, the Federal Reserve is committed to doing all that can be done to ensure that our economy is never again devastated by a financial collapse. We look forward to working with the Congress to develop effective and comprehensive reform of the financial regulatory framework.

Thank you.

Senator JOHNSON. [Presiding.] Thank you, Mr. Chairman.

Is there an agreement that 5 minutes should be enough on the clock? I do not want to be overly rigid, but so be it.

Chairman Bernanke, the weather has been unusually harsh across the country in the past month. This has disrupted business and Government activity and is likely to have an impact on employment. Do you think the effects will be strong enough to show up in the next month's employment statistics?

Mr. BERNANKE. Senator, first I would say that the harsh weather will not have permanent effects on the——

Senator BUNNING. Turn on your microphone.

Mr. BERNANKE. Pardon me. Senator, I would like to say first that the harsh weather is unlikely to have any permanent effects on the economy, simply a temporary effect. But it does seem likely that there will be some impact on the employment statistics for January. It is very hard to know exactly how much, but the snowstorms were during the week in which the information is gathered about payrolls. It may also affect unemployment insurance claims and some other kinds of information. So we will have to be particularly careful about not overinterpreting the data that we receive for January.

Senator JOHNSON. As Congress grapples with the need for job creation and the need to reduce our mounting deficits and national debt, can you talk about the impact unemployment and the budget imbalance could have on inflation?

Mr. BERNANKE. Well, currently Senator, inflation looks to be subdued. We are not expecting inflation to rise significantly in the near or medium term.

On the one hand, the unemployment and the low use, utilization, the low rate of utilization of labor has been a force keeping wage gains very lower, which, of course, from a worker' perspective is a problem. From the perspective of employers, they are seeing both very slow wage growth and because of all the cuts and cost-cutting measures, they are also seeing very strong increases in productivity, which are quite remarkable. So the combination of slow wage growth and high productivity gains means that the unit labor costs, the costs of production are, if anything, falling for most firms. So that, together with very weak demand in many industries, means that firms have very little ability or incentive to raise prices, which would, of course, tend to moderate inflation.

On the deficit, the impact on inflation in the near term I think is limited. Of course, it is important that Congress, the Administration, find solutions to our longer-term debt problems. Otherwise, it is conceivable—and I am not anticipating anything in the near term, but it is conceivable that it could lead to a loss of confidence in aspects of the U.S. economy. It could affect interest rates. It could affect the value of the dollar. And those things could directly or indirectly affect the state of the economy, the recovery, and, of course, the rate of inflation.

Senator JOHNSON. As the Federal Reserve begins to wind down purchases of mortgage-backed securities, what steps, if any, are needed to ensure stability in the housing market during this transition?

Mr. BERNANKE. Well, as you know, Senator, we are at this point planning to end our purchases at the end of this first quarter. A question is to what extent will mortgage rates be affected by the end of our purchases. Of course, even though we have stopped purchases, we still retain on our balance sheet $1.25 trillion of mortgage-backed securities, and we believe that the holding of all those securities off the market in itself will tend to keep mortgage rates down.

We do not know for sure how much mortgage rates will respond to our leaving the market. So far, there is little evidence of much change in mortgage rates, but obviously, we have to keep monitoring that. If there is a response which seems to threaten the broader economic recovery, we certainly would be prepared to review that decision. But, again, at the moment it does not seem to be that a large change in mortgage rates or any effect on housing is evident.

Senator JOHNSON. Although the minutes of the January 26–27, 2010 Federal Open Market Committee meeting indicate that core measures of inflation have been stable, they also indicate that headline inflation with swings in energy prices and core inflation may have been held down by unusually slow increases in the price index for shelter due to the housing crisis. Do you think that potentially higher future energy and housing costs pose an inflationary threat in the medium run?

Mr. BERNANKE. Well, we believe that the underlying trend of inflation, given stable expectations, given a very weak economy, looks to be subdued. Of course, we monitor energy and commodity prices very closely and they can vary substantially depending, for example, on the strength of the global recovery. Recently, energy prices have been roughly stable and futures prices don't indicate an expectation of sharp increases in the near term. So, again, we will continue to monitor energy prices, but currently, at least, they are not presenting a major inflationary threat.

The very high vacancy rates in rental properties are keeping rents down, as well as vacancies in homes, as well, and our anticipation is that shelter costs are going to remain quite subdued for some time.

Senator JOHNSON. Senator Shelby.

Senator SHELBY. Thank you.

Chairman Bernanke, this Committee continues, as you well know, to wrestle with financial reform and the role of the Fed has been a significant part of that debate, as you are well aware. Chairman Dodd has previously proposed stripping the Fed of its regulatory authority, allowing you and your colleagues to focus on your monetary policy, lender of last resort, and payment systems functions and so forth. On the other hand, some on the Committee have argued in favor of allowing the Fed to retain some type of regulatory authority over the largest institutions, perhaps some of the others.

What do you see—how do you see such an approach, as a net positive or a net negative here, and what would you do as Chairman of the Board of Governors of the Fed if the will of the Congress was to give the Fed another opportunity to be a regulator? What would you change, considering all the problems that were had in the last 7 years in the regulatory process?

Mr. BERNANKE. Thank you, Senator. As you know, I think that stripping the Federal Reserve of its supervisory authorities in the light of the recent crisis would be a grave mistake for several reasons.

First, we have learned from the crisis that large, complex financial firms that pose a threat to the stability of the financial system need strong consolidated supervision. That means they need to be seen and overseen as a complete company, reflecting the developments not only in their banks, but also in their securities dealers and all the various aspects of their operations.

A bank supervisor which focuses on looking at credit files is not prepared to look at the wide range of activities of a complex international financial firm. The Federal Reserve, in contrast, by virtue of its efforts in monetary policy, has substantial knowledge of financial markets, payment systems, economics, and a wide range of areas other than just bank supervision, and in our stress test, we demonstrated that we can use that whole range of multidisciplinary skills to do a better job of consolidated oversight.

By the same token, we need to look at systemic risks. Systemic risks themselves also involve risks that can span across companies and into various markets. There again, you need an institution that has a breadth of skills. It is hard for me to understand why in the face of a crisis that was so complex and covers so many markets and institutions you would want to take out of the regulatory system the one institution that has the full breadth and range of those skills to address those issues.

Let me mention your second point, and I think your point is very well taken. As I discussed in my testimony, we have taken very, very seriously both changes in our performance, changes in the way we go about doing supervision, but also changes in the structure of supervision, and we have made very substantial changes in order to increase the quality of our supervision, to increase our ability to look for systemic risks, and to use a multidisciplinary cross-expertise platform to look at these different issues. So we are very committed, and I would be happy to discuss with you through a letter or individually more details.

I guess I would also like, if I might just have one more second, the Federal Reserve, of course, made errors and made mistakes in the supervisory function, but we were hardly alone in that respect and there were——

Senator SHELBY. But what have you learned? I guess that is the question.

Mr. BERNANKE. Well, my——

Senator SHELBY. You and the Board of Governors. What have you learned?

Mr. BERNANKE. We have learned several things. We have learned, first, that regulations need to be tougher, and we have led the effort to strengthen capital requirements, to strengthen liquidity requirements, to put more controls, risk controls into these companies. We have learned that we need to have a more risk and systemic-oriented approach and we have changed our approach to do that. So we have gone at this very extensively.

Senator SHELBY. Mr. Chairman, I want to briefly get into the Volcker Rule and size limits. The Administration recently proposed, as you well know, that limitations be imposed on banks and bank holding companies with respect to trading activities, including proprietary trading, the so-called Volcker Rule. The Administration also proposed placing limitations on what was referred to as, quote, "excessive growth" of the shares of liabilities at the largest financial firms.

What are your views on the Volcker Rule proposal, and separately, on the proposal to limit excessive growth in the firms' liabilities? And do the regulators right now have the power, as some people have suggested, to invoke the Volcker Rule, or would you need legislation if the Congress so thought it was necessary?

Mr. BERNANKE. Senator, first, I think we would all agree that we don't want companies taking excessive risks when they are protected by the government safety net, so that is very important. There are obviously multiple ways to address those risks and they include capital requirements, and we have increased capital requirements, as well as, for example, restrictions on executive compensation, which affect willingness to take risks.

If you go about imposing the Volcker Rule, I think it would be difficult to do on a purely legislative basis because of the potential for having unintended consequences. So while on the one hand you may want to restrict purely proprietary trading, you also want to distinguish that from, say, appropriate hedging behavior——

Senator SHELBY. You have to be careful, don't you?

Mr. BERNANKE. You have to be careful of unintended consequences. Hedging, market making, customer activities can involve ownership of securities for a period of time. I do think if you want to go in that direction, you should at least allow some role for the supervisors to make determinations about individual activities. I think it would not be inappropriate if a supervisor determines that a company doesn't have the managerial or risk capacity to appropriately manage a particular activity, for the supervisor to be able to restrict that activity.

I would argue that we have that authority to some extent now, but if Congress wants to reinforce that, of course, it couldn't hurt.

Senator SHELBY. Thank you, Mr. Chairman.

Senator JOHNSON. Senator Reed?

Senator REED. Thank you very much, Mr. Chairman, and welcome, Chairman Bernanke.

A follow-up on the Volcker Rule. How would you implement it if you were to do it through your regulatory process?

Mr. BERNANKE. We would do it as part of our overall risk management assessment. We would look at the range of activities that the company engages in. There might be some activities that would be explicitly prohibited by legislation, say perhaps owning a hedge fund, for example. But if there are other activities, such as purchasing of, say, credit default swaps, I think it would be appropriate for the supervisor to, first of all, ascertain that the use of credit default swaps is primarily intended to hedge other positions and therefore is overall a net reduction in risk for the company as opposed to an increase or a speculative increase in risk.

Second, even if the purposes of the program are in some sense legitimate, there is still the question of whether the company has adequate managerial risk management resources to properly manage those risks, and what we saw in the previous crisis, and I think this is one of the things we really learned, is that many large, complex companies didn't really understand the full range of risks that they were facing and as a result they found themselves exposed in ways they didn't anticipate. So if a company didn't have strong risk management controls and a strong culture of system—enterprise-wide risk management, I think that would be also grounds for the supervisor requesting either substantial strengthening in those controls or eliminating those activities.

Senator REED. Just an observation. Those controls are much more rigorous today, but they tend to erode over time, particularly as these unpleasant crises fade. And also, the capacity of the regulators, the Federal Reserve and other regulators, to make very nuanced judgments about management, *et cetera,* there is really a question of regulatory capacity as well as managerial capacity that at least the last several months suggests that it won't be handled by simply sort of letting you do what you inherently can do now.

Mr. BERNANKE. Well, certainly Congress could provide guidance about what they would like to see shut down or make specific statutory recommendations or statutory laws. But another—I am sorry. I lost my train of thought.

Oh, yes, sorry. I just recalled. I think another part of the reform package that is very important is the resolution authority and measures taken to address the too-big-to-fail problem. If you can address the too-big-to-fail problem and get market discipline affecting firms so that investors will have an incentive to try to evaluate the risk taking of those firms, that will be an additional—not a panacea, but it will be an additional factor helping the regulators and the firm itself make good decisions.

Senator REED. Underlying this discussion of the Volcker Rule is a more general principle, I think. That is, what risks should taxpayers support? I think there is a consensus that traditional commercial banking, which everything has a risk, has historically been supported and should be supported. But the ability to access your credit facilities and your authority under 13(3) by large financial institutions whose primary activity is not commercial banking but either proprietary trading, which is inherently riskier, I mean, there is a real question here of whether they should have that access and I think that is at the heart of the Volcker Rule.

To your point about too big to fail, I mean, the size has not been indicative of the sort of capacity to fail, so again, I just—there are real questions that we have to wrestle with with respect to, as a policy that you will implement, whether we are going to, with taxpayers' money, support very profitable risk-taking activities when they work and catastrophic activities to taxpayers when they don't work.

Mr. BERNANKE. Well, Senator, as an example, consider the savings and loans, which basically were killed by interest rate risk. Today, they would either be able to securitize the loans that they made or they would be able to hedge that interest rate risk.

So I am not disagreeing with you at all. I think we all agree that we don't want excessive risk taking, particularly on a "tails, I win, heads, you lose" basis, certainly. But there are some legitimate purposes for using securities and we just want to make sure not to increase the risk——

Senator REED. No, I recognize the difficulty of sorting out a proprietary trade. You don't have the staff, frankly, to do that, to keep up with every trading platform and every trading floor in the country. So that is why I think there has to be perhaps a simpler approach, since these organizations are so large in terms of their trading versus the commercial banks, they might not qualify for the same type of support.

Thank you.

Senator JOHNSON. Senator Bunning?

Senator BUNNING. Thank you, Mr. Chairman. Thank you for being here.

On the discount rate increase, how much lending is currently outstanding at the discount window? I don't want to know the people, I just want to know the amounts.

Mr. BERNANKE. I believe it is in the order of $17 to $20 billion.

Senator BUNNING. OK. If that is the case, since there is so little discount window borrowing going on, the increase in the discount rate seems to be more for show than for substance. On top of that, you and the Fed have gone out of your way to downplay the importance of that move. Why should anyone take that move as a sign that you are serious about taking away the punch bowl at this time?

Mr. BERNANKE. Well, Senator, what we have been trying to do is to eliminate the extraordinary support that we have provided financial markets, and we had a wide range of programs that try to address the dysfunction in the commercial paper market, money market mutual funds, interbank markets, repo markets, and a variety of others. And as I mentioned in my testimony, on February 1, we shut down most of those programs. By June, we will have no more of these 13(3) programs——

Senator BUNNING. Except—except what Senator Shelby brought up. On Tuesday, the Treasury announced that they were starting up a supplemental financing program again. It is $200 billion-plus. Under that program, Treasury issues debts and deposits the cash with the Fed. That is the effective same thing as the Fed issuing its own debt, which you know is not legal.

Mr. BERNANKE. What it does——

Senator BUNNING. There are—well, let me finish with the question and you can answer. What are the legal grounds that the Fed and Treasury used to justify that program? And did anyone in the Fed or Treasury object when the program was created?

Mr. BERNANKE. Well, legally, we are the fiscal agent of the Treasury and we hold Treasury balances that they—for all kinds of purposes, so there is no——

Senator BUNNING. But they are not allowed to issue debt, Treasury.

Mr. BERNANKE. Treasury is allowed to issue debt.

Senator BUNNING. On its own?

Mr. BERNANKE. I don't—they issue bills and other kinds of debt all the time.

Senator BUNNING. Oh, yes, Treasury notes, Treasury bills, Treasury 2-years, 5-years, 10-years. But you are buying—you buying their debt.

Mr. BERNANKE. We are just paying them interest on their deposits on our balance sheet.

Senator BUNNING. OK. That isn't the answer that I wanted.

Given what you learned during the AIG crisis and the bailout, do you think Congress should be doing something to address insurance regulation or the commercial paper markets?

Mr. BERNANKE. Well, Senator, I think AIG is the poster child for, first, consolidated supervision. It did not have a strong consolidated supervisor that was paying attention to its derivatives activities, for example. That is very important to do. Second——

Senator BUNNING. Were those the ones in England?

Mr. BERNANKE. No, those were the ones, the CDS—the credit default swaps that the Financial Products Division was exposed——

Senator BUNNING. Weren't they located in London?

Mr. BERNANKE. Well, they were in any case accessible to U.S. regulators.

Senator BUNNING. I didn't ask that question. I said, but didn't AIG have an office in London that did those things?

Mr. BERNANKE. It had some foreign offices, but I believe that the Financial Products Division is headquartered in Connecticut.

Senator BUNNING. OK. Go right ahead.

Mr. BERNANKE. So again, to address AIG issues, you need a strong consolidated supervisor that can identify those kinds of risks to the company and you also need some methodology, and I think you would agree that we don't want to have too-big-to-fail firms. We don't want the Fed involved in these bailouts. So you need an alternative legal structure. We have supported a resolution regime. I know this Committee is considering alternatives that would allow the government, excluding the Fed, to wind down a firm like this in a crisis in a way that would not bring down the overall financial system. I think that is a very important direction.

Senator BUNNING. Does any other Fed Governor have their own staff?

Mr. BERNANKE. The staff of the Federal Reserve works for all the Governors. There is no——

Senator BUNNING. That is not my question.

Mr. BERNANKE. The staff—no, not dedicated, except for clerical——

Senator BUNNING. OK. Do you think they should?

Mr. BERNANKE. No. I think we all work collectively and we all get the support from the entire staff.

Senator BUNNING. Do Fed Governors have access to the Board's staff recommendations or do they only get to see the recommendations you approve of?

Mr. BERNANKE. They see the staff recommendations.

Senator BUNNING. They do?

Mr. BERNANKE. Yes.

Senator BUNNING. Have you ever tried to change or influence staff recommendations before they were presented to the Board?

Mr. BERNANKE. Not final recommendations, no.

Senator BUNNING. Your e-mails tell us differently.

Mr. BERNANKE. You are referring to an e-mail where a preliminary draft by a couple of economists——

Senator BUNNING. It was the Fed staff. That is what the——

Mr. BERNANKE. It was Fed staff, but it wasn't the Fed staff's recommendation because it was a draft done by several people in the division, not by the leadership of the staff. And it was, in any case, a recommendation that was outdated because of changes in circumstances.

Senator BUNNING. That was in your opinion.

Mr. BERNANKE. Yes, sir.

Senator BUNNING. I have more, but I am past my time.

Senator JOHNSON. Senator Akaka?

Senator AKAKA. Thank you very much, Mr. Chairman.

I want to welcome Chairman Bernanke back to the Committee and also to congratulate and welcome him and wish him well in his continued tenure as Chairman of the Board of Governors of the Federal Reserve System. We both share a commitment to improving the lives of working families by better educating, protecting, and empowering consumers.

Chairman Bernanke, Chairman Dodd and other Members of this Committee helped develop and enact meaningful card reform legislation. I am proud that the law includes provisions from my Credit Card Minimum Payment Warning Act which will provide consumers with detailed personalized information on their billing statements and access to reputable credit counseling services. Consumers will learn the true costs of making the minimum payments and how long it will take for them to pay off their balance if they only make minimum payments. Consumers are also provided with the amount that they need to pay to eliminate their outstanding balance within 36 months, which is the typical length of a debt management plan. This useful information recently started appearing on statements, and I looked at it and was happy to see it.

My question to you is, how will the personalized credit card minimum payment information influence the behavior of consumers, and also what additional personalized disclosures pertaining to other financial service products would enable consumers to make better informed choices?

Mr. BERNANKE. Well, Senator, I congratulate you on those contributions. As you know, the Federal Reserve developed extensive disclosures for credit cards as well as some rules which were very extensively incorporated in the Congressional bill that passed and was signed by the President.

Obviously, as you point out, the more information you can provide consumers, the better decisions they can make and the kinds of information about minimum balances, time to pay off, the cost of the card, the penalties they might face, those are the kinds of things people need to shop. If they can shop, the market becomes more competitive and you get a market that better serves consumers.

We have been very focused on good disclosures, good information. We have in our disclosure reform that we did earlier, we—I don't see Senator Schumer here yet today, but there is the so-called Schumer Box, which has——

Senator BUNNING. He is at the White House.

Mr. BERNANKE.——has a list of key features of the account. We have done a lot of work on that to make it easier to read and more understandable to consumers.

One of the innovations pioneered by the Federal Reserve has been to use consumer testing. We have gone out and instead of having some lawyers just sort of figure out what should be in the disclosure, we have actually gone out to shopping malls and had people look at the disclosures and then we have tested them to see how much they understand and retain. And by doing that, we think we are improving considerably the ability of folks to understand what they are buying and encouraging them to shop around to get a better deal.

So again, I congratulate you on your contributions to this and on your longstanding support for financial literacy and for clear disclosures.

Senator AKAKA. Mr. Chairman, unfortunately, investment banks, credit card issuers, and predatory lenders through their excessive bonuses and unfair treatment of consumers are giving the term "bank" an even greater negative connotation. I am afraid that abused or angry consumers may continue to underutilize mainstream financial institutions. After having grown up in an unbanked home, I personally know the challenges that confront the unbanked. Many community banks and credit unions provide vital financial services to working families by providing opportunities for savings, borrowing, and low-cost remittances.

The question is, why is it essential that we attempt to encourage the unbanked and the underbanked to utilize mainstream financial institutions more?

Mr. BERNANKE. Well, Senator, as you well know, for various reasons, lack of information, cultural reasons, and so on, many minority or immigrant communities don't make much use of the regular banking system. The cost of that is they may find themselves paying much more for check cashing or for short-term borrowing or for other services that they need. In most cases, they would be better off in a mainstream financial institution.

We have encouraged banks, credit unions, and other financial institutions to reach out to minority neighborhoods by, for example, having people on staff who speak the language, through advertising and through other activities, through the CRA, the Reinvestment Act. By doing that, you attract people from these communities and give them access to the broader financial network. It helps them not only to get better deals on their financial services, to pay less for check cashing, for example, but it also helps them begin to learn how to save or learn how to borrow for a home and do other things that you need to have access to the broad mainstream financial system in order to achieve.

So I think it is very important that mainstream financial institutions continue to reach out to people in their communities, including minorities and immigrants, to attract them to use of mainstream financial services.

Senator AKAKA. Thank you. Thank you very much, Mr. Chairman.

Senator JOHNSON. Senator Johanns?

Senator JOHANNS. Thank you, Mr. Chairman. Mr. Chairman, good to see you again.

Mr. Chairman, let me start out and say that I think we have done some good work as we have tried to move through regulatory reform. I think everybody, quite honestly, has learned from the mistakes of the last years, no doubt about that. But I must admit, I have a concern about something that I think is shared by probably everybody here. It may be a little sensitive, but I want to ask about it, and that is Fannie and Freddie.

We have spent a lot of time talking about too big to fail and looking at private companies and how gigantic they had gotten and how that really put us in a box. In the end, the taxpayers got put on the hook for that. Isn't Fannie and Freddie the government version of that too big to fail? And how do you get out of that box?

Mr. BERNANKE. Well, Senator, first, as I am sure you know, the Federal Reserve has a long record of warning about the dangers of the structure of Fannie and Freddie. There are numerous dangerous, including conflicts of private and public interest, and most notably, insufficient capital to support the very large portfolios that they held. And, in fact, it turned out they didn't have enough capital and now the U.S. Government, the taxpayer, is subject to substantial cost.

Right now, we are kind of in no man's land. Fannie and Freddie are in conservatorship. They are part of the government's efforts to maintain the housing market because there really is no other source of mortgages at this point, or mortgage securitization. But certainly, this is not a sustainable situation and I think it is very important that we move toward clarifying the longer-term status.

There are numerous ways to go. I have talked about some in a speech. But to give two examples, one would be a privatization approach, which might allow the privatized firms that securitize mortgages to purchase insurance from the government for the mortgages that they package and sell.

Another possibility would be just to acknowledge that these are government utilities and incorporate them with Ginnie and FHA and other government agencies. So those are two very different approaches, but both of them have the advantage of eliminating this platypus kind of, you know, neither fish nor fowl status that those firms have now.

Senator JOHANNS. Neither approach will eliminate the exposure that the taxpayer faces. Would you agree with me there?

Mr. BERNANKE. Well, for example, if you had a situation where privatized firms were not allowed to hold large portfolios, which is a major source of the risk, first; and, second, that they paid actuarially fair premiums to the Government as opposed to the implicit support they had before, there would still be risks to the taxpayer, but at least there would be some compensation, some premium is being collected.

Senator JOHANNS. In effect, it sounds to me like a Government liquidation, and I do not know that I would want to personally buy into that. But I guess as a taxpayer we would all end up buying into that. But it is a huge number, isn't it? It is probably $1 trillion plus of exposure.

Mr. BERNANKE. Well, it depends how you count exposure. Of course, the mortgage-backed securities outstanding are in the trillions.

Senator JOHANNS. Yes.

Mr. BERNANKE. The Government's commitment at this point is a couple hundred billion to those institutions.

Senator JOHANNS. Let me also draw your attention to something, and I am running out of time here, but I was just catching up on some things, and I noticed today that first-time unemployment filings have increased. That was not expected. Durable goods orders have fallen the most since August. That is not a good sign. And that excludes, I think, transportation.

The market has responded by dropping at least at this point by 160, and I appreciate the market can have up days and down days. I am starting to read more and more articles about the national debt interfering with economic recovery. And yet I do not see an effort to slow that down here.

In fact, if we were just to stand down and say, OK, we will adopt the President's plan, there are trillion dollar deficits over the next decade. I cannot imagine how that turns out for—you know, I will be 70 years old the next decade. I am not going to live long enough to pay that off. That means my children and grandchildren are going to have to deal with that.

I am beginning to wonder, Mr. Chairman—and I do not want this to sound overly pessimistic, but I am beginning to wonder whether low interest rates really have any possibility of spurring this economy. And I will tell you what I am thinking about, and you may not even have enough time to respond. Unless there is demand, unless we can get consumers back into it, it just seems very unlikely to me that you are going to see much growth.

I talked to people who handle the freight—the railroads, the trucking companies. They are not seeing much improvement. All these signs point to a situation where, quite honestly, this economy is still enormously flat. And I am not sure that offering somebody an interest rate at 2 percent versus 4 percent is going to get us on the other side of this, and I would just like your thought on that.

Mr. BERNANKE. Well, first, I agree that the economy is still very weak and very disappointing in that respect. I think low interest rates do tend to help, and I will give you a couple of examples.

One, you mentioned the durable goods. Notwithstanding—I have not had a chance to get into those numbers in detail this morning, but investment, actually equipment investment, equipment and software investment has been something of a bright spot and has been growing. And part of the reason for that is that larger firms at least have pretty good access to credit at reasonable rates in the corporate bond market, for example, and that has supported the investment rebound, which is a big part of what we are seeing in the recovery.

Another example is that the Fed's actions, interest rate actions and our purchases of mortgage-backed securities, have helped bring down mortgage rates. That has helped to some extent to stabilize demand for housing and helped—as you may know, house prices seem to have flattened out and begun to rise a bit, which is very important for consumers in terms of their wealth, in terms of the risk of foreclosure, and in terms of, you know, restarting activity in the residential construction sector.

So those are two examples where we see growth. We did have 4-percent growth in the second half of 2009. I think the issue we face is will the growth be fast enough to materially reduce the unemployment rate at a pace that we would like to see, and that is a big uncertainty right now. But we are getting some output growth at this point.

Senator JOHANNS. Mr. Chairman, thank you.

Senator JOHNSON. Senator Brown.

Senator BROWN. Thank you, Mr. Chairman. Mr. Chairman, nice to see you.

We all know for most of our Nation's history—I am going to go in a bit different direction. For most of our Nation's history, manufacturing and agriculture and transportation drove our economy, whether it is steel in Youngstown or agriculture around places like Lexington, Ohio, or the Port of Cleveland shipping raw materials and finished goods all over the Midwest.

As an expert on—as an economic historian, as you are, and an expert on the Great Depression, you are aware, obviously, of the role of manufacturing, especially a historic role, in pulling our Nation out of recession.

As many Ohioans can tell you, can painfully tell you, manufacturing steadily declined over the last three decades. At the same time, we know that the financial industry has rapidly expanded.

As recently as the 1980s, manufacturing made up 25 percent of GDP; financial services made up less than half of that, in the vicinity of 11 or 12 percent. Those numbers crossed in the 1990s. Now it is almost a direct flip. Manufacturing, 12 percent; financial services, 20 or 21 percent.

Wall Street's output, put another way, was equal to all the Farm Belt States and the Industrial Belt States combined. In 2004, 44 percent of all corporate profits in the United States came from the financial sector compared with 10 percent from manufacturing. And I say that as a preface to my question for this reason: Kevin Phillips, the writer, has noted sort of the history of great nations in the last 400 years. Habsburg Spain, the United Provinces of Netherlands, and Imperial England, all three saw their economies go from manufacturing, shipping, agriculture—depending on which of each of the three—and energy into more and more emphasis on financial services. And the financialization in that sense is what probably cost those empires their empire. They were countries that never really recovered in the wealth creation. It really is the fact that banking is not an independent source of wealth. It does not cause our prosperity. The success of banking is created by our success and our ability to create wealth.

Then I hear people, when I talk about manufacturing policy, I hear your predecessors say this, I hear advisers in the White House, regardless of party, say we cannot have a manufacturing policy, we cannot pick winners and losers. Well, it is pretty clear in the 1980s that this country, this Government, your predecessors, and the Treasury Department picked winners and losers. They decided that financialization, the financial services sector should be the winner as we got rid of usury laws, as we changed rules and deregulated and all those things. So we put ourselves in a position where, as Kevin Phillips said, finance is the chosen sector of the U.S. economy.

So my question is this: As your role, your statutory role, a mandated target of 4-percent unemployment, it is at least twice, maybe three times that right now. When I look at a building on the Oberlin College campus 20 miles from my house, fully powered by solar energy, the largest solar-powered building on any college campus in America, about 8 years it was built. All the panels were built in Germany, a country that had an industrial policy that stimulated demand and supply and have built clean energy jobs way better than we have. You read the articles in the paper about what China is about to way outcompete us on alternative energy, solar and wind turbines. We know all that. We still sit with no manufacturing policy.

So my question is this: As the economic historian that you are, are you troubled by the fact that the financial sector is now twice the size of the manufacturing sector? And I put parentheses around the next part of that, that no country that I can see in economic history has done well when that happened. Are you troubled by that? And if you are troubled by that fact that the financial industry is twice the size of manufacturing, flipping what it was, what should we do about it and what are you doing about it?

Mr. BERNANKE. Well, financial services obviously has a place to play in a modern economy, and it is a productive industry in the sense that it helps allocate capital more effectively and share risk and do important things like that. I think we would all agree that over the past decade or so, financial services, residential construction, and some other sectors may have become too big relative to other sectors, and we are now seeing the painful unwinding of that process.

I think the right way to address the size of financial services is to make sure that it is being productive and constructive, and that means having a good regulatory regime that directs—that provides a context in which financial services will do productive, constructive things for the economy. So good financial regulatory reform should lead the financial services industry to adjust to an appropriate size that is right for the economy.

On manufacturing, it is really a mixed picture in the United States. We still are probably the biggest or one of the biggest manufacturers in the world. We are the most productive. We have had extraordinary increases in productivity, in manufacturing recently. That, in fact, is part of the reason why the employment share of manufacturing keeps going down, is that we need fewer workers to produce a car or an airplane than we used to.

Senator BROWN. That is true, Mr. Chairman, but look at the profits of the financial services—the chasm between financial services and manufacturing is—the chasm is big in terms of the percentage of GDP. It is even larger in terms of profits in the last 5 years. Keep that in mind.

Mr. BERNANKE. So in terms of the financial industry, you know, I think markets should be allowed to work, but they should be allowed to work in an environment where regulation is appropriate and where there is an appropriate level playing field. So you would, I suppose, agree that financial services were not appropriately regulated or appropriately supervised. If we strengthen that regulation and allow appropriate changes to take place, that ought to bring down the size of the financial services industry to a size which is more appropriate for our economy.

Manufacturing is another issue. I think there are lots of things that mostly Congress—I do not think the Federal Reserve has a lot of direct influence on any particular sector. But there are a lot of things that Congress can do. There is tax policy, there is immigration policy, trade policy.

There is the issue of picking winners and losers. I think that is difficult to do. But you gave the example of solar panels. Solar panels are a viable industry with Government support if the Congress determines that, for example, for global warming purposes that carbon-reducing technologies or capital is socially desirable and, therefore, supports that activity, then that will—the private sector will, therefore, come out and produce that. So that is a determination of Congress whether it needs a public subsidy. I do not think that many of those alternative energy sources would survive by themselves in a marketplace because whatever value they have in reducing carbon, for example, is not captured in their price in the market.

So I guess what I am saying is that we need, first of all, better regulation in finance to bring finance down to an appropriate size and an appropriate set of functions. And there are a set of things that Congress can do to try to improve our trade balance, for example, to improve the tax policy.

I think, frankly—and this is a topic that I never could get much traction on. I think that our immigration policy which restricts severely the number of highly trained, skilled immigrants is a problem because bringing those sorts of folks in helps our high-tech industries develop more competitive—become more competitive. So there are things I think you can do to strengthen manufacturing.

I would also just note that while it has been a very severe recession in the manufacturing sector, manufacturing is, in fact, leading this recovery, as you pointed out. Industrial production has been very strong, and we are seeing, in fact, growth in manufacturing employment. So it has been important in that respect.

Senator BROWN. One real quick closing statement. If manufacturing were even close to the same percentage of GDP as it was, think how much stronger—how much quicker we would come out of this recession in terms of recovery, just as a point of reference perhaps.

Thank you, Mr. Chairman.

Senator JOHNSON. Senator Vitter.

Senator VITTER. Thank you, Mr. Chairman. Thank you, Mr. Chairman, for being here and for your work. Thank you for your monetary report.

Mr. Chairman, when I go around my State and have town hall meetings and other things, obviously folks are real concerned about jobs and the recession. But I get just as many questions and expressions of concern about what they consider the next looming crisis caused by spending and debt.

Now, obviously, you gave us a monetary report focused on things you can control. Federal spending and debt is not something you can directly control.

What is your general projection and outlook, once we are out of this current recession, for the impact on the current levels of what are, in my view, unsustainable Federal spending and debt and the impact on the economy?

Mr. BERNANKE. Well, Senator as you point out, at the moment we are in a deep recession. Revenues are down to 15 percent of

GDP. We have a lot of costs arising from the recession, and so deficits are extremely high.

The really interesting question is: What is the structural medium-term deficit? If you look at the range of estimates provided by the OMB and the CBO over different scenarios and so on, most of them suggest that the deficit after we come out of recession, say 2013 or so and the rest of that decade, should be somewhere between—will be somewhere between 4 and 7 percent of GDP.

That is not a sustainable number. A rule of thumb is that in order to keep the ratio of outstanding Government debt to our GDP more or less constant—I mean, it would be better even to reduce it, but just to keep it constant, you need to have deficits more in the area of 2 ½ to 3 percent.

So I think it is important—so 4 to 7 percent is not sustainable. If it were actually to happen, what we would see is increasing interest costs, and eventually the markets would just entirely lose confidence in our fiscal policy, and interest rates would spike.

So it is very important for Congress—even though we are now still in a very deep recession or in a very weak economy, it is important for Congress to try to clarify how we are going to exit from our fiscal position and try to provide a credible blueprint for how our Federal deficit will be controlled over the next 10 years and 20 years.

Senator VITTER. And just to follow up on that, let us say in the future we reach a point that we are truly out of this recession in a meaningful way and those deficits are where they are projected, 4 to 7 percent, versus 2 ½. How quickly would that become a major problem in terms of the economy?

Mr. BERNANKE. Well, it could become a problem tomorrow if bond markets are not persuaded that Congress is serious about bringing down the deficit over time. But in any case, certainly if you look at the CBO numbers, you know, by 2025, 2030, under existing policies we are going to be seeing the curve very sharply rising and——

Senator VITTER. But surely way before that it would be an issue and a problem in terms of interest rates, *et cetera*.

Mr. BERNANKE. Absolutely. Absolutely. And you would be seeing debt-to-GDP ratios rising; you would be seeing crowding out of investments and other problems. Yes, absolutely.

Senator VITTER. So is it fair to say, you know, we are perhaps not seeing those immediate threats because we are in a serious recession? Once we come out of that, those immediate threats, the chances of their having a real negative impact elevate enormously.

Mr. BERNANKE. That is right. And we are not completely sure we will not have negative effects even sooner than that.

Senator VITTER. Before that.

Mr. BERNANKE. Depending on how interest rates respond.

Senator VITTER. Right. Mr. Chairman, I want to Fannie Mae and Freddie Mac. On June 18, the Treasury Secretary said before us, "Fannie and Freddie were a core part of what went wrong in our system." I assume you agree with that.

Mr. BERNANKE. Yes, sir.

Senator VITTER. We are discussing regulatory reform. In terms of the draft bills we are discussing, there is no title on Fannie and

Freddie. When should we be addressing that? Sooner rather than later, or when?

Mr. BERNANKE. Well, I think for no other reason than just trying to reduce uncertainty in the markets, the sooner that you can come to some clarity on the future of Fannie and Freddie, the better. Of course, I understand that you are dealing with a lot of complex issues in financial reform and health care and in other areas right now. But it would be, obviously, helpful to try to get some clarity on that.

That does not mean necessarily that you can get to that new situation quickly. It is going to take some time to move from the current situation to a more stable long-run situation. But certainly I hope Congress is looking at this issue now and thinking about where you want to go.

Senator VITTER. OK. We are really not looking at the issue now, at least in a meaningful way. And the schedule, as I understand it, particularly from Treasury, is not until 2011. Is there any good reason, in your opinion, to essentially put that off to 2011?

Mr. BERNANKE. Well, I think their concern is just that the agenda is so full and is there time, you know, for everyone to focus on that. And that is not my judgment to make, but I think that is their concern. I think they would agree that an earlier resolution would be better, certainly.

Senator VITTER. OK. Mr. Chairman, I want to go to resolution authority and 13(3) type authority, and we have talked about this before, but it is really important so I want to have the discussion quickly again.

If in our regulatory reform package we come up with a reasonable, workable wind-down mechanism to resolve large failed institutions in an orderly way, to take them down, to break them up in an orderly way, if we do that, would you support our also ending, taking away 13(3) and other similar authority from the Fed and others to put taxpayer dollars in large quantities into individual firms?

Mr. BERNANKE. In short, yes, I would support that—13(3) has been used two ways. It has been used in what you would call bailouts, and it has been used in developing these broad-based lending facilities to help individual markets, like the ones we just closed down on February 1st. I think the latter is a valuable thing to have in case of a future crisis, but we would be happy to give up any involvement in the wind-down of failing, systemically critical firms.

Senator VITTER. And just to make clear, I am talking about the former not the latter, so I think we are on the same page.

Mr. BERNANKE. We are on the same page.

Senator VITTER. As I understand the Treasury's position, they say they support a resolution authority, but they essentially also want to keep that other authority as "foam on the runway," as sort of a backup plan, however you want to term it. Do you think that is necessary or a good idea?

Mr. BERNANKE. It depends on exactly how the resolution authority is structured. It might be that you want the Fed to be available to provide liquidity as part of the resolution process, for example. But, generally speaking, I prefer that you develop a process that leaves the Fed to do only its standard discount window lending against collateral as it always has done, without use of the emergency authority.

Senator VITTER. So if we get the resolution authority right, you do not see any need for that other authority with regard to individual firms continuing to exist?

Mr. BERNANKE. We would be very happy if you could find a solution that allows us to give up that authority.

Senator VITTER. OK.

Senator JOHNSON. Could you gentlemen wrap it up?

Senator VITTER. OK. I have one more question, which is about audits and transparency of the Fed. I welcomed your recent written comments about that as certainly movement in the right direction from my point of view. One thing you underscored was some delay in terms of disclosing certain action so as not to disrupt the markets in terms of an immediate disclosure of certain activity.

What is your reaction to the idea of having the same disclosure with a lag for all loans and collateral used to secure loans made by the Fed—in other words, the normal discount window activity?

Mr. BERNANKE. Including the names of the borrowers?

Senator VITTER. Correct.

Mr. BERNANKE. That is a concern that we have, and the problem is that if banks think they are going to be—that their names are going to be publicized, then they will not come even if they are under attack by the market, even if there is a panic or a run on the firm. So it is a very delicate issue. I think we will have further discussions, I am sure, but we are quite nervous about essentially shutting down the viability of this critical tool, which proved to be very valuable during the crisis. So that is something that we are concerned about, even, you know, with a delay.

Senator VITTER. So even with a delay.

Mr. BERNANKE. You know, I am sure we will have further discussions about this, but, you know, again, if a company is under attack by people who do not believe that it is stable and they know that if they go to the window, their name is going to be published even with some delay, they may feel that they have no option, that they will just have to fail, because if they go to the window and that is revealed, then the market will then believe that they, in fact, are not stable, and the whole purpose of the discount window loan will not be served.

So that is a particularly sensitive one for us, even though that is a relatively small part of our lending.

Senator VITTER. OK. Thank you.

Senator JOHNSON. Senator Warner.

Senator WARNER. Thank you, Mr. Chairman. I appreciate getting my time.

Thank you, Chairman Bernanke, for being here. I do share one concern that Senator Vitter mentioned about the deficit, and, gosh, I wish we would have supported Senator Gregg's proposal when we had a chance. I think it was still the best, perhaps last best proposal to actually force this Congress to take an up-or-down vote on a plan that would put us back into fiscal sanity.

I want to come back on the question of financial regulation. Mr. Chairman, you make, I think, a strong case about the need to have sophisticated, strong supervision for bank holding companies and that this supervision has to take a look at not just individual supervision but systemic risk in a macro level. I still think we are weighing where that role should be, and I am not sure, at least from my standpoint, while you make a strong case that you have fully made the case that it absolutely has to be deposited within the Federal Reserve, that it could perhaps be deposited elsewhere.

You know, one of the comments you have made—and we are now 18 months after the crisis, and you have said that you have looked at the Fed within supervision of the bank holding companies, stronger capital, stronger risk supervision. You know, we have had a lot of discussion over the last 18 months about size. We have talked a little bit earlier—Senator Reed raised questions about the Volcker Rule, and I share some of your concerns about how you draw those lines. Chairman Dodd raised the question about use of some of the instruments out there in terms of derivatives.

Could you tell us a little bit in this last 18 months, with this increased focus on the large sophisticated bank holding companies that you currently supervise, you know, what steps that has taken to strengthen that supervision in a little more specific way than you did in your——

Mr. BERNANKE. Well, it would take me quite a long time.

Senator WARNER. Perhaps you could give that for the record. I would like to see——

Mr. BERNANKE. OK. So just very briefly, there has been a lot on the regulatory side. We are working with our colleagues in Basel and elsewhere to substantially strengthen and modernize the capital requirements, liquidity requirements, executive compensation requirements, risk management requirements, and a whole raft of things just to give a tougher, stronger regime. So that is an important part.

In terms of supervision, we are restructuring our internal organization, and we think a landmark event, a watershed event was the stress tests last spring, which were incredibly successful, which the Federal Reserve led. And I think the Federal Reserve's input to that was to supplement the standard bank examiner going in looking at the credit file with a lot of analytical statistical information which helped improve comparability across banks, which helped to determine the factors underlying possible risks to banks, which integrated the macroscenarios so we could do stress tests and those sorts of things.

So in our internal structure, we are, first of all, creating a new group which will bring together not just the bank supervisors but people from other dividends—and I mentioned the economists, the payment system people, the financial people, and so on—to manage the supervisory effort for the system as a whole, and they will be looking at a portfolio of firms, and so it will not be a firm-by-firm operation where this teams looks at Citigroup and this team looks at JP Morgan. Instead, they will be looking collectively at groups of firms doing horizontal comparisons and taking a more systemic type approach.

On top of that, we will also have a quantitative evaluation team which increases something we have already done, which is currently for small banks, we do not go in every year or every 6 months. What we tend to do is we look at a bunch of data, a bunch of call report information, for example, and use statistical models to try and evaluate whether there are problems that we should go back and look.

Well, expanding that idea in a much more sophisticated way, we can give these quantitative folks the license to look at a range of activities in the firms and look at them across firms and try to use their offsite type analysis to supplement and support the on-side analysis.

Senator WARNER. Because I want to be absolutely sensitive to my colleagues' times who have been waiting here for a long time, I want to just get one more point out.

Mr. BERNANKE. Sure.

Senator WARNER. I have got a lot of other questions, but I will take them at another time.

Specifically in terms of, I believe, within safety and soundness you can look at proprietary trading, hedge fund activities, and private equity, whether you have ramped up on that, and one of the issues that one of the panels raised with us a little bit earlier that I thought was quite good was the whole question of interconnectedness, and I will close with that. But I would love to get your quick comments on that, recognizing other folks have been waiting a long time.

Mr. BERNANKE. So we have not tried to apply the Volcker rules. We have not forbidden some activities. But we have——

Senator WARNER. Heightened.

Mr. BERNANKE. Yes, we have heightened our activities, particularly with respect to risk management. We find that was the big Achilles heel in the whole situation, that firms did not really have a sufficient understanding of the broad-based exposure across all their business lines to certain kinds of risks. And we have been working very hard on that part.

Senator WARNER. Interconnectedness.

Mr. BERNANKE. On interconnectedness, this is a place, I think, where the Federal Reserve really has a comparative advantage. We have, for example, been working very hard on strengthening the operations of the credit default swap market, the tri-party repo market, *et cetera.* And in doing that, we are looking at how the—it is critical to us—you know, JP Morgan plays a critical role in the tri-party repo market. DTCC plays a critical role in the securities clearing markets and so on.

So we are integrating those with our analysis of the firms, and that is extremely important. We are paying a lot of attention to that.

Senator WARNER. Thank you, Mr. Chairman.

Senator JOHNSON. Senator Gregg?

Senator GREGG. Were you here earlier than I was, Jim?

Senator JOHNSON. Senator DeMint?

Senator GREGG. I think Senator DeMint was here. He left. I do believe he is—go ahead.

Senator DeMint. Thank you, Mr. Chairman.

Thank you, Mr. Bernanke, for enduring us again here. I really appreciate you being here. I apologize for missing some of the questions, but I did hear your testimony.

I would just like to get a broad perspective. I know we are talking about a lot of the details of financial monetary systems, but just maybe a larger concern. As I look at what we are doing here in Washington overall and a lot of the debate about specifics, it does seem that the underlying debate is more about are we going to have a free market economy or more of a centrally planned, government-directed economy. And there are very different views on monetary policy depending really on what our paradigm is, I believe.

My concern is as I look at where we are even versus 5 years ago, that the Federal Government owns two of our largest auto companies, our largest insurance company, our largest mortgage company. We are heavy in debate about expanding government control of health care. We pretty much control the energy sector, where we drill, all of those kinds of things. We are considering now a new financial reform package that would supercede State control, go all the way down to payday lenders and pawn shops. And in the process of moving in this direction, we have created huge debts, unsustainable, and 10-year projections are more than a trillion dollars a year additional debt.

My concern is that in your testimony, that you didn't mention any of this. Not until we questioned the debt was it a concern. I mean, I know it is a concern. I am not suggesting it is not. But I would think that given the fact that the uniqueness of the American economic system has a lot to do with more of the Adam Smith invisible hand, bottom up, that the Chairman of our Federal Reserve would express some concern about the expansion of government ownership and controls of large sections of the private sector economy, knowing that there is a tipping point at some point where we no longer function as a free market economy.

I am not sure if we have gone past that or not, but my concern and alarm is that you had not expressed any concern or alarm of the need for Congress to look at ways to devolve and divest of these things, to try to move things back in that direction. Is that not a concern, or is your focus just not—your focus is what you have to do with what you have got to work with and that is just not your area?

Mr. BERNANKE. Well, Senator, first, I have, obviously, a lot of things to talk about, so I can't cover everything of concern.

Senator DeMint. Sure.

Mr. BERNANKE. Let me talk about the financial sector, and I think there, that returning to a more market-oriented financial sector is a top priority and we are, in fact, doing that. For example, all the big banks have now paid back their TARP money and we are trying as quickly as we can to get those banks financed by private capital, which they have raised a great deal of private capital and it is very important.

AIG, of course, is very problematic, but they are selling off assets in order to pay us back and they are making progress on that, and our objective there, of course, is to put them back in the private sector.

We talked earlier about Fannie and Freddie, and I do think that we have to get away from this neither fish nor fowl situation where they are part public, part private. I think one solution would be to privatize those firms, and I think that is an interesting direction to go.

If I might, I think perhaps the most important thing, as a number of people have discussed, this Committee is looking at too big to fail, looking at resolution authorities and so on. If you were able to get a strong resolution authority, you would do more to bring back a level competitive playing field, market discipline into the financial sector than anything else that you can do, because with a true resolution authority where creditors know they will lose money, shareholders know they will lose money if the firm fails, then they have the incentive after that to evaluate the firm's credit, quality, and their risk taking and so on, and that would, again, bring back competition, bring back market discipline.

So I am very much in favor of bringing back the market in all these areas, recognizing that the financial sector does need appropriate regulation, but market forces and competition ought to play a substantial role, and I am all in favor of doing that and will work with you on that.

Senator DeMint. Well, I appreciate that and I suspect we have very much the same philosophies about economies. But I think the country and the world needs to know that and I just would appreciate as you look at where we are that there is a need to back away from where we are. A lot has happened in a short period of time that has expanded the government scope in a lot of areas, and there is a big difference in central planning concepts, as you know more than I do, than free market accountabilities, and I think you are talking about and believe in. So I appreciate that and I thank the Chairman for allowing me to ask a question. I yield back.

Senator JOHANNS. Senator Bayh?

Senator BAYH. Thank you, Mr. Chairman. It is good to see you again.

First, just a comment. I count myself as one who believes the Fed should retain a robust role in the supervisory area. The reason for that is that any new entity would have to get up to speed. There would be a learning curve there that I think would present some difficulties.

Second, my strong impression is that you and your team have learned from the recent past about what can go wrong and that can inform your decisionmaking going forward.

And third, my impression is that you gain some important insights by the oversight at the micro level informing your judgment about setting monetary policy and making macro decisions. So that is kind of my take on how we ought to view this going forward.

Just a couple of questions. First, as you mentioned, the last quarter GDP figures were pretty good, but a big chunk of that was inventory rebuilding and that sort of thing. So we are all worried about the sustainability of the recovery, the risk of a double-dip, that sort of thing.

You mentioned the key to this, to have it become self-sustaining, is final private demand. I don't want you to wade into the political thickets, but there is a debate in Congress about what measures we might take to augment final private demand. Do you have any sense about what steps would be prudent to take at this time to put some wind at the back of the recovery and ensure that it is sustainable?

Mr. BERNANKE. Well, as you know, Senator, I don't like to inject myself in debates on fiscal policies——

Senator BAYH. But as an economist, do you care to offer any?

Mr. BERNANKE. Well, no. I don't think I can separate my role that easily. My sense is, I mean, just as an observer, it seems that the Congress is debating a number of potential fiscal actions, but none of them are—I think no one is proposing anything of the scale we saw last year, as far as I know——

Senator BAYH. Well, let me put it another way. The Senate voted the other day on a $15 billion package. I voted for it. There are some good things in there. Some of my colleagues disagreed, took a different approach. Just in terms of scale, I mean, most people would say, even myself, some good things, I voted for it, but that is unlikely to be of a magnitude that is going to materially add to final private demand, to use your words. Do you have any sense about the scale that would be needed to have a material impact on final private demand?

Mr. BERNANKE. Well, if these smaller programs are well designed, they can be very beneficial, and so we don't want to denigrate those at all. But——

Senator BAYH. I didn't mean to, and I wasn't asking you to——

Mr. BERNANKE. But my sense is——

Senator BAYH. I am just trying to get a sense of, what can we do to try and ensure the economy gets the legs under it that it needs?

Mr. BERNANKE. You know, this is going to sound like a dodge, but I think that if you are going to do more fiscal policy in the near term, it would be very constructive to combine that with more attention to the exit strategy 5 years down the line, because I think there is a risk that financial markets may begin to become concerned about the sustainability of U.S. Fiscal policy, and the more you can assure them of ultimate——

Senator BAYH. It is actually not a dodge. It leads to my second question. You were asked by Senator Dodd about the use of derivatives and the problems they are having in Greece. Senator Vitter touched upon the deficit. I would like to raise the question of Greece again. At what level—you know, our debt-to-GDP ratio is now going to be going up. Some of that is unavoidable because of the recession we are experiencing. But you are asking us to focus on the intermediate term, which I think is exactly right, and that is why I was a strong supporter of the Gregg-Conrad Commission and other steps.

Do you have a sense, at what ratio of debt-to-GDP do we begin to approach the tipping point and really run into a risk of currency problems, interest rate spikes, the kinds of things that Greece is now experiencing? Do you have any judgment about that?

Mr. BERNANKE. It is, of course, very hard to know, and we are very different from Greece in terms of the type of our economy, the size of our economy, the fact that we have our own currency and all those sorts of issues.

Just to give you one number, Ken Rogoff and Carmen Reinhart's book about financial crisis has been discussed in many quarters, mentioned a 90 percent debt-to-GDP ratio as a level at which growth becomes impacted after that. Now, saying that, we have got a wide variety of experience among industrial countries, ranging up to very high levels in Japan and in other countries. But our historic levels, we were down to the 30s in terms of debt-to-GDP and I think heading toward a 100 percent debt-to-GDP ratio would be very undesirable, particularly given the aging of our society and those obligations we are facing longer term.

Senator BAYH. And we are estimated to get up close to, what, 65, 70 percent here over the next five to 10 years, something like that?

Mr. BERNANKE. Yes.

Senator BAYH. My last question. My time is about to expire. And we also finance our debt. Japan is mostly internal, isn't it? We have a lot of external, which makes it a little bit different.

Are you at all concerned about Japan's recent steps to constrain demand there? What impact might—their economy is obviously growing very robustly. Does that present any risks to the global economy, the fact that they are moving in that direction?

Mr. BERNANKE. Do you mean China?

Senator BAYH. I am sorry. I misspoke. China. Yes, I did mean China.

Mr. BERNANKE. No, I am not concerned about it. I think they have to make appropriate decisions about not overheating their economy. They are obviously growing very quickly. From our perspective, we would like to see more flexibility in their exchange rate as being part of the process for reducing overheating risks. But I think it is important that they achieve an appropriate balance between very rapid growth and the risks of overheating, the risks that their extensive credit extension becomes troubled. So, no, I am not particularly concerned about that right now.

Senator BAYH. Thank you for your service, Mr. Chairman. Thank you.

Senator JOHNSON. Senator Gregg.

Senator GREGG. Thank you, Mr. Chairman.

I want to associate myself with Senator Bayh's comments relative to your regulatory authority and the range of regulatory authority that you should retain. I do think it is important that you be a major player in the regulatory atmosphere, and I do believe that although there are obviously errors that have occurred across the regulatory regimes, that yours are no more grievous than anybody else's, and in fact, I think in many ways, less grievous.

To get into this issue, however, which Senator Bayh has touched on, Senator Vitter has touched on, which is when is the tipping point, you have basically alluded to the fact that it may be sooner rather than later if the markets lose confidence in us, the international markets especially. And we have had a budget presented to us which puts us on a path, as you described, of unsustainability because deficits will run at five to 7 percent, debt will triple, and the public debt-to-GDP will hit 80 percent by 2015, 2016, and we will hit 60 percent this year, actually.

So the question becomes, what do we need as a government to do to give the markets confidence that we are actually taking some action, real action in trying to control the out-year event, not the immediate issue of getting out of this recession, but the fact that in the out years, we have an unsustainable situation which could lead to a significant financial issue for us as a nation and the reduction in our lifestyle and the quality of life and the standard of living of our children?

Mr. BERNANKE. Well, the earlier question was about the debt-to-GDP ratio, which was the tipping point. Another way to look at this is what does the trajectory look like? If the trajectory is such that you have an unstable dynamic where interest payments get larger and larger, that in turn increases the deficit, that in turn leads to higher interest payments and it explodes, essentially, then that is a situation where markets will become very concerned.

So I think this is as much a political question as an economic question. The question is, can the Congress—and I recognize these are very, very hard problems. I don't want to in any way downplay the difficulty that it is for Congress to address these hard problems. But it would be extraordinarily helpful if there was persuasive evidence that Congress had the political will to achieve over a number of years a stabilization of the debt-to-GDP ratio or of the fiscal trajectory, and that could be done either through whatever mechanisms you choose to undertake or it may be through specific plans, or maybe even through actions that you could take now that would affect expenditures and deficits in the out years.

Senator GREGG. But something should be done.

Mr. BERNANKE. It would be very—again, the point I would like to make is that there really is some—it is not just a question of paying today for a benefit tomorrow. There is benefit today if, in fact, you can increase the confidence of the markets that we will, in fact, address this issue. It gives you more scope and probably lower interest rates today.

Senator GREGG. And arguably, the markets aren't going to have that confidence unless there is an event which gives them confidence, which means the Congress has to address the gap between spending and revenues with the fact that that gap is primarily driven by spending, in my view. That is a rhetorical question.

So where are we in the perception of the world relative to this country? Does the world have confidence that we can get our house back in order, in your opinion?

Mr. BERNANKE. Well, the markets seem to have confidence. I mean, we can sell 20- and 30-year debt at relatively low interest rates and I think that is a vote of endorsement for the long-term ability of this country to respond to these challenges. But we have to make good that trust. We have to follow through.

Senator GREGG. And if we look at the issue of how you get the money out of the market, you have put $2 trillion, basically, into the economy. Is that about right?

Mr. BERNANKE. The Federal Reserve?

Senator GREGG. Right.

Mr. BERNANKE. Our balance sheet is $2.3 trillion. It was $900 billion before we started, so we have expanded our balance sheet by about $1.4 trillion.

Senator GREGG. So you have got to get that money back out at some point, right?

Mr. BERNANKE. That is right.

Senator GREGG. And I notice you listed a few things here that you have got as mechanisms. There is one, however, that I wasn't that familiar with. I am not familiar with it at all, to be honest with you. You said, the Federal Reserve is currently refining plans for a term deposit facility that can convert a portion of depository institution holdings of reserves balances into deposits that are less liquid. Does that mean you are basically going to require bigger reserves?

Mr. BERNANKE. No. It means that instead of having reserves held at the Federal Reserve only on an overnight basis, we are going to offer a slightly higher interest rate so that banks will be willing to hold reserves with us for an extended period, and that would take those reserves out of the overnight money markets and give us more control over the Federal funds rate.

Senator GREGG. So you are not raising the reserves. You are just going to say——

Mr. BERNANKE. No——

Senator GREGG.——you are going to encourage people to put more money in because you are going to pay them interest on it. That is part of your new authority?

Mr. BERNANKE. That is part of the authority Congress gave us, to pay interest on reserves.

Senator GREGG. OK. Thank you.

Senator JOHANNS. Senator Bennet.

Senator BENNET. Thank you, Mr. Chairman.

I was going to go in a different direction, but just because the last part of this was so useful, I wanted to say we just heard the Fed Chairman talk about the political will in Congress to be able to address this issue, and I just—it is breathtaking to me as somebody new here that 2 weeks ago, we had the chance, because of Senator Gregg's leadership and Senator Conrad's leadership, to vote for a bipartisan commission—that is all it was—to take a look over a period of time and give us recommendations for an up or down vote, and we didn't have the political will as an institution even to support that.

So I want to thank Senator Gregg for his leadership and I hope we will try again, because we need to demonstrate the political will that you are talking about if we are not going to leave our kids a completely diminished set of opportunities. But I will come back to that.

I wanted to ask you a question a little bit along the lines of what Senator Brown was asking, but different. In Colorado, if you look at the last period of economic growth in the country before we went into this terrible recession, that period of economic growth resulted in an $800 decrease in median family income in our State. So the economy grew, but middle-class family income fell, as it did across the country. For our middle-class families, I would argue, we have got two recessions that we are trying to recover from, this one and the last period of economic growth that didn't drive their income.

And at the same time, in our State, the cost of health insurance over that period went up by 97 percent. The cost of higher education went up by 50 percent. So you have got an economy that is driving costs of things that are important to move families ahead, but income is going down. And my understanding is it is the first time our economy has grown in our history and median family income went down.

I just wonder if you have some thoughts about that, because it just feels to me like there are some structural things going on in our economy that we need to be worried about, we need to concern ourselves with.

Mr. BERNANKE. You are correct that median family income hasn't kept up with average GDP or productivity, and there are a couple of arithmetic——

Senator BENNET. Let me just say, because you made that point earlier, as well, and at the same time, because of the increases in productivity you were talking about, it is not apparent where the jobs are going to come from to be able to help ameliorate the issues that I was just talking about. I will stop there. Sorry.

Mr. BERNANKE. So just in terms of the median income, you mentioned one factor, which is the higher costs of benefits and medical care, those things which have lowered wage growth as opposed to total compensation growth. But more importantly is the increased inequality. So you can have a growing economy, but if there is more going to the top, then the median guy could still be coming down and that is an issue, and I have given some speeches on this and tried to address this to some extent. I mean, it is a very vexed issue.

The one thing I think everybody agrees about is that income inequality is to some extent tied to educational skills and equality. We live in a society where technology is advancing, where we are competing with other countries that have very large pools of unskilled labor, and therefore, as Senator Brown was saying, union jobs in manufacturing are no longer a normal—or a predominate form of employment. So for all those reasons, in order to get more people to enjoy the benefits of productivity and higher economic growth, the training, skills, education is a critical part of that.

One of the advantages of the United States in general is that we do have a very flexible system. You know a lot about education. But besides K to 12, we have community colleges, junior colleges, on-the-job training, and all kinds of other ways for people to get skills.

One of the things I would just say to this Committee as you think about our unemployment problem, one of the lasting scars of this recession is very likely to be a generation of people who have been unemployed for a year or 2 years and will find it difficult to come back and get a decent job because their loss of skills, because they will have to explain why they were out of work for 2 years. So that retraining, those aspects are very important.

Senator BENNET. I think I am already out of time, but let me just observe that I agree on the importance of education, and it is one of the sad facts of the legacy of the last decade that in addition to the economic issues we were just talking about, we started the decade, as I understand it, roughly first in college degrees, and 10 years later, we are roughly 15th in the world. So I wouldn't say that our track record there over the last 10 years has been particularly good, either, and it just is a reminder of the urgency that we face.

This is working itself out in the daily lives of Americans. I think there is enormous anxiety that we are at risk of being the first generation of Americans to leave less opportunity to our kids and our grandkids. It goes to the deficit and the debt issue we were talking about earlier and also these fundamental economic issues.

I appreciate your being here today. Thank you.

Mr. BERNANKE. Thank you.

Senator JOHANNS. Senator Bennett.

Senator BENNETT. Thank you very much, Mr. Chairman, and Chairman Bernanke, I appreciate your being here.

Picking up on what Senator Gregg was talking about, simply an observation so that everybody understands exactly what we are talking about. When we say political will, cut spending, two-thirds of the Federal budget is in mandatory spending, and that is a combination of the entitlements, Social Security, Medicare, Medicaid, farm subsidies, interest on the national debt. I am an appropriator. None of those items come before the Appropriations Committee. All of them are on autopilot to be spent by virtue of commitments that have been made.

I once had a very wealthy man say to me, "Explain to me why the Federal Government sends me a check every month for," I have forgotten the number, $250 or whatever it is. He says, "I don't need it." And I said, but Sam, you are entitled to it, and by law, we are going to give it to you whether we have got it or not.

And let us make it very clear that when we are talking about spending, we are talking about fiscal policy, these are terms we hide behind when we talk to our constituents and give speeches about Congress has got to get tough on spending. The real fact is that we have got to have the courage to attack the most popular programs in American history. We have got to level with our constituents and tell them we are talking about the programs you value the most and you insist are off limits. If the entitlements are off limits for any kind of discussion here on fiscal policy, we are going to hit 10 percent of GDP within 24 months unless we have the courage to deal with. It is 65 to 67 percent of the budget now. We are on autopilot to see 75 percent of the budget within 10 years and the other 25 percent includes defense. So if you take defense out of the remaining 25 percent, you have got about 10 percent of the budget that you have to get tough on in order to solve this problem.

All right. I have finished my soapbox, but I think anybody who is paying attention to these hearings ought to hear that and understand that because that is the reality.

Let me get to a question relating to the debt. We had our experiences, you and I and all the rest of us, a little over a year ago with respect to TARP. One of the things you said to us at the time, and we banked on as we voted for TARP, was that this was not a bailout. This was money that would come back to the Treasury, would come back to the Federal Reserve, wherever it came from. And, in fact, you were right. The money is coming back, has come back. A lot of the major players of TARP have paid it back.

Now, the Treasury is recycling that money. Senator Gregg and I have been very firm about we were in the room when the conversation was made as to what would happen to that money when it came back, and we thought, naively, that we wrote into the law the requirement that when it came back, it would be used to pay down the national debt. But we have been informed by the Treasury lawyers that that is not what we did.

I would like your reaction. My opinion is, TARP solved its problems. TARP did, indeed, avoid a worldwide depression—a worldwide collapse. We maybe are in a worldwide depression, but TARP did, indeed, avoid a worldwide collapse in that very difficult weekend in September when you came here and said, "I have run out of tools," a very chilling kind of comment. One of my colleagues said, "I feel like I am in a James Bond movie," listening to the Chairman of the Federal Reserve say we have run out of tools.

I think TARP worked. My position, and I would like your reaction, is that having worked, it is now time to end it so that the Treasury does not recycle it and that when the money does come back from those people who benefited from TARP, it goes to pay down the national debt. I would like your reaction to that.

Mr. BERNANKE. Well, first let me just say on the first part of your comments that this is why I think it is so very difficult to address these deficit problems, because those are very popular programs.

I agree with you that the TARP, unpopular as it is, achieved its basic objective of stabilizing the banking system. It did not do as much as we would have liked to create more credit. It is now coming back. The financial firms—I would put aside the autos and the mortgages.

Senator BENNETT. Right.

Mr. BERNANKE. Just talking about the financial firms, including AIG, putting them all together it looks like a pretty good chance we are going to break even on that, which would be a remarkable—in the long run, which would be a remarkable achievement.

You have put me in a very difficult position. I do not know how to adjudicate the legal debate. I think basically Congress——

Senator BENNETT. Forget the law. Just give me your opinion of whether or not you think TARP should be terminated.

Mr. BERNANKE. It boils down—well, I do not think—I think Treasury was right not to terminate it unconditionally at this point because there is still some risk out there that we may have further financial problems. I think it is small. But to have some flexibility in case some new crisis were to arise, I think at least for a short period, is not unreasonable.

I am afraid I am going to have to defer to Congress on whether or not you think the other programs that are being proposed, like support for small business lending and those things, are within the spirit of the TARP or good programs in themselves. I do not know how to help you on that one.

Senator BENNETT. All right. Well, this Member of Congress thinks they are not.

Thank you, Mr. Chairman.

Senator JOHNSON. Senator Merkley.

Senator MERKLEY. Thank you very much, Mr. Chair. And thank you, Chair Bernanke, for your testimony.

I first wanted to note that when Senator Vitter asked the question on whether there is a need to limit the Fed's ability to use Section 13(3) Federal Reserve Act emergency lending power funds to support individual firms, I just wanted to note that in Chair Dodd's draft that action—that is, emergency lending to individual firms—is prohibited. And so a point I was asked to put forward and clarify.

I wanted to turn to the issue of recapitalizing our community banks. This is something I hear about back home all the time, the challenge of these banks to be able to put out new loans given their leverage limitations and their capital challenges. And I had supported an effort to recapitalize community banks, and the Administration has now put forward a very similar plan. I was just wondering if you could give us any insights on your perceptions on how the role of community banks in supporting lending to small business might be a factor in the recovery of our economy.

Mr. BERNANKE. Well, I think it is very important, and I guess on the subject of regulation, I guess I would like to remind the Committee that the Federal Reserve, although we have been very focused on large institutions over the last couple years because of the crisis, we also supervise a large number of community banks, State member banks, and they provide us very important information about the economy. We can learn from them what is happening at the grass-roots level, what is happening to lending. And, you know, to get to your question, that kind of information is very valuable for us as we try to understand what is going on in the economy.

As you point out, the community banks have in many cases, when they are able, when they are strong enough, have been able to step up and provide lending. They are very important lenders to small businesses, for example. And as you say—and this was the issue that Senator Bennett was raising—one of the proposals that the Treasury has made is to create a fund that would capitalize small banks that demonstrate that they can increase their lending to small businesses.

So in the spirit of my previous conversation with Senator Bennett, I am not going to endorse or not endorse that approach. There are other approaches also for addressing small businesses. But I would say that if you go do that, one suggestion the Treasury makes, which is to separate it from the TARP, maybe to pass it—this would address Senator Bennett's question—to pass it separately so that it is not stigmatized or otherwise associated with the restrictions with the TARP, which increase the chance that that would be a successful program. But we certainly do value the small banks for what they are able to do, and if we are going to get this economy going again and get employment growing again, then small banks, small businesses are going to be critical for that.

Senator MERKLEY. Thank you very much, and I want to turn to another issue, which is that I was meeting with a group of Members of Parliament from Canada two nights ago, and when I asked them about the economic meltdown and the impact on Canada, they smiled and said:

> Well, you know, we kept the risk out of our banking system, and now there is a huge economic movement in which we are going down, Canadians are going down and buying up the foreclosed real estate in the United States.

And certainly in your role, there is the chance to look at and learn how different models interacted around the world. And would you just take a second to comment on the Canada structure, how they managed risk, whether there are any insights for us here in our efforts to provide regulatory reform?

Mr. BERNANKE. I will start with one point, which is that Canada's monetary policy was very similar to that of the United States, and they had very different outcomes. So those who blame this on monetary policy should address that issue. I think the differences between Canada and the United States had to do with their regulatory structure, and there were two primary advantages that they had.

First, they simply had a much more conservative bank supervisory structure in terms of what they allowed banks to do, in terms of the amount of capital that banks had. You know, in the go-go days, they would be considered staid and unexciting. But, of course, that turned out to be the right way to go, and they are looked at as models around the world as we look at banks supervision.

The other thing that they did, which we did not avoid, was they avoided the deterioration in underwriting standards in mortgages and the proliferation of very low downpayments and bad underwriting and other problems that came back to bite us in the crisis.

So they took a very conservative approach, and it really paid off for them, although given that they are the biggest trading partner of the United States, they still have had a significant recession, of course.

Senator MERKLEY. Well, if I can follow up on your point about the underwriting standards, some have argued that the reason that Canada proceeded to maintain solid underwriting standards was that they had an independent consumer financial protection agency and that that vision of defending consumers from tricks and traps in lending was never subverted, if you will, to other goals, be they safety and soundness, monetary policy, and so forth. Any insights on the role that institution plays in Canada?

Mr. BERNANKE. I do not know the facts on that, but I would agree with you that it is very important to have strong consumer protection laws.

Senator MERKLEY. I think I am over my time now, so I will stop there. But thank you very much.

Senator REED. [Presiding.] Senator Shelby, a second round.

Senator SHELBY. Thank you, Mr. Chairman.

Chairman Bernanke, the Chinese have made a number of comments about their massive U.S. Treasury holdings. Last year, they publicly "worried" about whether their investments were safe. Recently, they have expressed the belief that they should respond to some of the Obama Administration decisions by selling billions of Treasury holdings.

While China does not have a financial interest in rapidly—I do not believe they do—dumping its U.S. dollar assets, it may have other competing political interests.

Do you believe that there is a risk to stability of the financial system associated with risk to the value of the dollar stemming or coming from international relations between China and the United States?

Second, do you believe that China's large dollar reserve holdings pose a threat to the stability of the global financial system given the leverage those holdings provide to China to enable it to pursue a policy of pegging its currency at an artificially low value?

I know that is a mouthful, but I think these are important questions.

Mr. BERNANKE. Well, let me try to address that. First is just the factual question. I do not think there has been any significant change in China's holding of dollar reserves.

Senator SHELBY. OK.

Mr. BERNANKE. They have continued to acquire reserves. They have done that when the dollar was falling. They did that when the dollar was rising.

Senator SHELBY. Do you think that is a good thing, a bad thing, or are you indifferent about it?

Mr. BERNANKE. I think it arises from a couple of problems.

Senator SHELBY. OK.

Mr. BERNANKE. One problem is their foreign exchange policy to keep the currency pegged, and in order to do that, they have no alternative but to buy treasuries. The other reason is the global imbalances, the fact that they run this very large—which is related, of course, to foreign exchange policy, which is that they run a very large current account surplus while we run a current account deficit. And it was one of the objectives discussed by the G–20 leaders in the recent financial summits that we should all work to try to get a more balanced trade and capital flow situation. So I think it would be a healthier situation if China saved less and we saved more and as a result they were not accumulating dollar assets so quickly and we had a more balanced financial picture.

I do think that those large capital flows and the potential instability of those flows can be a risk to our financial system, and, you know, I think we need to try to get those imbalances rectified.

Senator SHELBY. Picking up—and it has already been mentioned a couple of times by Senator Vitter and others—about the GSEs, at this point, as has been said here, there is no indication that any GSE reform will take place in the near term. In fact, just yesterday Secretary Geithner indicated and I think you alluded to this—that the Administration is unlikely to provide a plan for reforming these institutions prior to 2011 at the earliest.

I know it is difficult and I know it is costly, but while implementing reform will take time, could you describe to the Committee here some of the risks that we face should we not start the process of reform as soon as possible? In other words, if we kick the can down the road, we could cause difficult problems, could we not?

Mr. BERNANKE. Yes, sir. First of all, I think you and I have a lot in common on this particular issue.

Senator SHELBY. We have worked together on it.

Mr. BERNANKE. We have worked together on it. The Federal Reserve has had concerns for a long time, and you were a supporter of very good, strong regulatory oversight of Fannie and Freddie. And unfortunately, you know, we know how it turned out, that they did not have enough capital.

You know, I think the current situation is worrisome. It obviously is a costly situation. And it also generates a certain amount of uncertainty in markets as people try to anticipate, you know, what the U.S. housing financial situation is going to be in the future. Housing policy is a very big part of our financial policy in this country, and the lack of clarity about that is an issue.

Now, again, let me just say I sympathize with Secretary Geithner in that there is an awful lot going on and financial reform is complex. But I do hope we will be thinking about where we want to take Fannie and Freddie soon so that we can at least provide some clarity to the markets and to the public about, you know, where we think this ought to be.

Senator SHELBY. Thank you, Mr. Chairman.

Senator REED. Senator Menendez.

Senator MENENDEZ. Thank you, Mr. Chairman.

Chairman Bernanke, welcome and congratulations on your confirmation.

Mr. BERNANKE. Thank you.

Senator MENENDEZ. I was pleased to support you.

Let me ask you, over the next few years, there is going to be more than $1 trillion in short-term commercial real estate loans that will reach maturity, and the ongoing credit crunch will make it very difficult for owners of viable commercial real estate to secure long-term financing.

In 2007, at this Committee hearing with others, I said we were going to have a tsunami of foreclosures in the housing market. I was told that was an exaggeration. I wish they had been right and I had been wrong. And I see this as the next looming crisis.

You know, it seems to me that the Federal Government failed to act on the warning signs about the home foreclosure crisis, and I am very concerned that we are not acting on increasingly clear warning signs about this commercial mortgage market.

So I am wondering, first, do you believe that this is a very serious issue facing us down the road and might this emerge as our next economic crisis? And regardless of how you might characterize it, which I will wait to hear what you have to say, what do you think we can do?

For example, I have been told that this is one in which community banks will face a fair challenge across the spectrum. Is, for example, allowing those banks to amortize losses over 10 years an option so that we do not completely dry up lending and at the same time maybe have a lot of these institutions close as a result of it?

I am looking to get ahead of the curve, but that curve is coming—that tidal wave is coming really soon, and so I would like to hear your views on it.

Mr. BERNANKE. Senator, I share your concerns about this. This is yet another place where the Federal Reserve's oversight of small and regional banks has been very informative for us. We have been able to follow the situation closely and to look at its implications for the broader economy and for the financial system.

It seems likely that small and regional banks will be facing a lot of challenges from losses on commercial real estate, and the bank regulators are watching this very carefully because it is going to put a lot of pressure on some banks. Chairman Bair, I think the other day, put out a list of problem banks, which has been obviously increased, and one of the key reasons for that is the commercial real estate issues that a lot of small banks are facing. It has the implication not only of putting pressure on the banks, but if a small bank has lost capital because of its losses in commercial real estate, then it does not have the funds to make loans to small businesses, for example, so it can permeate, it can affect the broader economy as well.

Just a few comments. As I said, we are very alert to this. We are concerned about it. We and the other bank regulators have tried to address it. We have put out commercial real estate guidance to the banks which attempts to address the question you raised about how to deal with debts that are coming due. And that guidance, one of the main purposes is, first of all, to avoid unnecessary writedowns. So one of the guidances we give is that a commercial real state project that is able to make the payments but whose collateral value has declined should not necessarily be written down for that purpose, for example.

Our guidance also gives specific examples and helps banks see how they can restructure loans, just like we restructure residential mortgages, in ways that will keep the loan current without having a major writedown for the bank. So we have been doing that; as bank regulators, we have been trying to find solution.

I also want to mention the TALF again, which is still open for commercial mortgage-backed securities. We have had a bit of success in bringing down commercial mortgage-backed security spreads and in starting up some activity, including activity outside of the Fed in creating new CMBS securities. So we are very focused on those issues, and we have addressed it in a number of different ways.

I want to end with just a little bit of—I would not say good news, but lately the evidence on commercial real estate is that there seems to be some improvement in some places, that the fundamentals are a little better than we had feared in some cases as the economy has done a bit better. And as we said, we have seen some more progress in the CMBS market and in banks' ability to restructure loans.

I do not disagree with your initial characterization that this is a very, very serious problem that we have to continue to monitor, but I would put forward just a sliver of optimism recently in terms of some improvement in the outlook for that category.

Senator MENENDEZ. If I may briefly follow up, Mr. Chairman? Chairman, I appreciate your answer, and I appreciate the guidance that the regulators have given. That is somewhat helpful. I am just concerned—and I am happy to hear that there is a sliver of a silver lining here about some improvement in certain sectors.

But my sense is that that is not going to meet the challenge before us, and I hope that we are thinking prospectively about what else we need to do or be ready to do, because it seems to me that if the worst-case scenario happens—and I have to be honest with you. I have heard from a wide sector of community banks, and I have heard from a wide sector of those who are in the commercial real estate market, who tell me that there is not a market out there for the renewal of these mortgages. And as such, it could be a body blow to this economy at a time that we are seeing recovery take place. And that would be hugely unfortunate as well as consequential in a very real way to our overall economy.

So I would love to continue to engage with you on figuring out how we are going to continue from all different levels—not just the Federal Reserve, but we have also talked to the Treasury about this. We need to figure out how do we best meet this challenge, because it is a challenge that is coming. And while, you know, those who maybe were irresponsible beyond a certain degree will have to face the possibility of closure, the breadth and scope of this is something that I am afraid of the consequences of what it means to our overall economy.

Mr. BERNANKE. Thank you. We are very focused on it and we would like to work with you on it.

Senator MENENDEZ. All right. Thank you, Mr. Chairman.

Senator REED. Senator Bennett?

Senator BENNETT. Thank you, Mr. Chairman.

The one thing that I hear most often and I think my colleagues hear most often as they talk about where we are right now, a constant, constant complaint that banks aren't lending. And when I talk to the banks, they say, well, we are better than we were. Year over year, we are better in 2010 than we were in 2009, so the volume has gone up and we are doing our best, but we can't find creditworthy borrowers. We are ready to loan, but we can't find creditworthy borrowers.

And then when I drill down a little more, I find the real challenge comes from regulators who come in with a definition of creditworthy borrowers that say to the bank, OK, you used to make auto loans at this number on your credit report and now, if that isn't this higher number, you can't make the auto loans. I have had business people with whom I have been involved personally, now divested myself, say we go to our bank with whom we have had a 30-year relationship, say we want to make this acquisition, and can we get a loan to fund it, and instead of saying yes, as the bank has always said before, we like your business plan, we like your track record, you are solid people, you know exactly what you are doing, they say, we will give you this loan if you can demonstrate that you can pay out of your current cash stream. Well, if I could pay out of my current cash stream, I wouldn't be coming for the loan to try to make the acquisition. And so additional jobs or additional productivity that would come from what we would normally think of as very ordinary kind of transactions is simply not there.

And inevitably, it always comes back to the regulators won't let us do this. The regulators have tightened their requirements of what is considered creditworthy.

You are the primary regulator. You see this, I am sure, every day, or at least your staff does. I would like your reaction to that because that is what I hear after the rhetoric is all over and the screaming is all over in a political way. That is what I hear from the business people. The banks are not supporting true entrepreneurial activity in this country, and until they do, we won't get the jobs back, we won't get the economic recovery going, and they are saying it is primarily because of tightened standards on the part of the regulators.

Mr. BERNANKE. Well, it is a difficult problem and one we are very focused on, as well. First of all, there is a tradeoff. Probably credit terms were too easy before the crisis. They have tightened up some. Lately, banks seem to have leveled out. They are not tightening any further, at least. But there is a tradeoff between making sure that you are really making good loans versus making sure that creditworthy borrowers are not denied.

Now, our focus at the Federal Reserve has been to achieve an appropriate balance. We want to make sure that creditworthy borrowers who are creditworthy can obtain credit, and we have been very aggressive in trying to do that. We started with, again, these guidances, but these are instructions to our examiners as well as to the banks which say, first of all, that we strongly encourage banks to make creditworthy loans because it is good for the bank, it is good for the borrower, it is good for the economy. We have trained our examiners to take that approach.

We have most recently put out yet another guidance on small business which actually says, you know, you should not be denying credit based on what business you are in, whether you are restaurant or whatever, or what geographic location you are in. Again, this issue about your collateral value. If that has declined, that should not be a reason not to make the loan. We are encouraging so-called Second Look Committees who look, again, at loans that have been turned down just to make sure that there is not a way to make that loan.

So our guidances, our regulatory philosophy, our training of our examiners has been very focused on getting that appropriate balance.

Now, I have said this in previous testimonies. People say, well, I am not convinced. What is your evidence? So since then, we have been really trying to do outreach and try to get information directly back from banks, small businesses. We have, for example, put questions in the NFIB's Survey of Small Businesses to get more information about their credit experience. We are requiring banks to provide us more information on small business loans. We have a series of meetings and programs at the Reserve Banks which bring together small banks, small businesses, community development organizations, and so on.

We are doing our best to go out there and find out what is really happening, because in some cases, I mean, I think you would agree, in some cases, the regulator is a good scapegoat and——

Senator BENNETT. Yes. I understand that.

Mr. BERNANKE.——and gets the credit for the problem. But the Federal Reserve, because we have interest, of course, in safety and soundness, but we also have interest in a healthy economy, and that insight that we get and that balance is very important. I realize it doesn't filter down to every bank and every situation, but we are making enormous efforts to get that balance.

When you do talk to your business acquaintances, first, ask them who the regulator is who is causing the problem, because it is not always the Federal Reserve——

Senator BENNETT. I think that is fair.

Mr. BERNANKE. But if you are hearing stories related to the Federal Reserve, I would be more than happy to talk to you about it and hear more details.

Senator BENNETT. Well, if I could just quickly, Mr. Chairman, one other aspect of this that I have discovered as I have talked to the people in the venture capital community, they say, we are not in the venture capital business anymore. To the degree we are investing any money, we are doubling down on previous bets, because the pattern used to be the venture capital would come in, fund the startup. Once the startup proved its viability, it would then go to a bank and get the money that it needed to get to the point where it could then make an IPO and go public.

And, they said, we are now discovering that the start-ups that we funded in that first wave can't get the bank funding, so to keep the organization alive and protect our first investment, we double-down on our bet and we are now in a position we have never, ever been in before. We are providing what the banks used to provide, and as a consequence, there is no VC money available for new start-ups and new activities.

So I am delighted to hear your focus on this. I think you are exactly right with the kinds of things you need to do and I simply encourage you to keep doing it.

Mr. BERNANKE. We are hearing the same things on venture capital that you are hearing.

Senator BENNETT. Thank you, Mr. Chairman.

Senator REED. Thank you, Senator Bennett.

Mr. Chairman, again, thank you for your testimony and for your leadership. You, in response to several questions, pointed out how central the housing sector is to our economy, and one of the areas of great concern to all of us is the mortgage foreclosure situation. Frankly, we have not effectively responded to that yet. It is a growing phenomenon. In my State, one out of ten homes are either in foreclosure or 90-days delinquent, and that saps not only the energy from the economy, but with the uncertainty in the employment market, with the fear of losing your home, particularly for people at mid-life, their sense of the American dream is evaporating. Part of what we have to do is not only get the economy right, we have to get the confidence of the American people restored, and their trust.

So specifically, I am wondering what you can do as the Federal Reserve to compel institutions to do more to modify mortgages. I get complaints constantly, I am sure my colleagues do, that there is a help line number. You call it and, oh, yes, sure, and then we don't get back to it. I know there are a lot of press releases about everything that is being done, but until I think you make it clear that this is an important objective, we will get a lot of motion and not a lot of results.

And I would assume, for example, I would hope that as within your powers of supervising the management could insist that at least there is a calculation done for each mortgage, whether a refinancing would be better than a foreclosure, or something like that which would be an open process, a quick process, and encourage institutions that you regulate—if you can't order them, then encourage them, and you have many tools to encourage them—to do more.

Mr. BERNANKE. We are doing so. I guess I would first mention that our mortgage-backed security purchases——

Senator REED. Yes.

Mr. BERNANKE.——lowered the mortgage rate and allowed for some millions of refinances, which I am sure has been helpful. As you know, the leadership in terms of actual programs is the Treasury's program, the HAMP program, and there are a few others, the Help for Homeowners and those, and we felt that our best way of contributing is to be supportive of those things and to strongly encourage both banks and, in our case, as consolidated supervisors, we also have supervisory responsibilities for non-bank subsidiaries, whether it is some servicers or mortgage companies or whatever, to participate and to be effective in those programs.

And we have for some time now been both looking for solutions to barriers, legal or accounting barriers, and we have been doing research to try to support these programs. For example, we have long felt that the problem of being underwater, the principal issue, is a serious one, and so that was why we were supportive of some of these efforts, like the Hope for Homeowners, that involves a principal reduction. Unfortunately, that program apparently has not been successful in bringing in a lot of participation, but we continue to look at different approaches to get restructuring.

I think it is encouraging. The Treasury, I know, is not only trying to do their best to ramp up the HAMP program, and I think we will see more permanent modifications coming in since they have a pretty big pipeline at this point, but they are also doing some pilot programs that involve alternative approaches.

For example, one problem that their approach doesn't deal with is the problem of somebody who is unemployed, can't even make a reduced payment. So what is needed there is not a permanent modification but some temporary assistance. Another issue has to do with principal reduction. So in some of their pilot programs, I think they are looking to try to take some of these different approaches.

We have worked with them, our economists worked with their economists, and we have been very engaged in trying to figure out what is the best approach. It is a very hard problem. Unfortunately, many foreclosures are just hard to avoid for a wide variety of reasons. But where there is a preventable foreclosure, it is not only in the interest of the borrower, but in the interest of the bank and of the whole economy to try to avoid it.

Senator REED. I will concede, it is a difficult problem, but sometimes you have got to send a very strong message. For example, you know, could you set a goal, maybe institution by institution of modifications as a condition to access your credit facilities? These institutions are borrowing money at virtually zero percent and then they are turning around saying, we can't modify a loan because of the interest, or we will do, from 8 percent, we will cut it 50 basis points, when essentially many of these people, when they pay their taxes, they are giving them zero percent loans.

Mr. BERNANKE. Well, I don't think we have to use that threat. I think we could use our supervisory authority, and we went back—in November of 2008, we made very clear in our guidance that we expected full compliance and full cooperation on this issue and we have had many conversations with the banks and——

Senator REED. Expecting it and getting it are two different things, and I think we have reached the point we have got to get it, Mr. Chairman. I know you agree conceptually, but we have just got to move on this issue. Senator Menendez sort of previewed another potential problem with commercial, but we are in the midst of this great residential and it goes right to the core of economic confidence and ultimately consumer demand and everything else that we have to do.

Let me switch quickly, and you have been very kind to take these questions, but at this juncture and going forward, are you using multiple tests for the adequate capital of institutions and the adequate sort of resources, *i.e.,* leverage, indexes, liquidity measures, tangible capital as well as risk-based capital, or are you still essentially and formally simply relying upon the Basel capital requirements?

Mr. BERNANKE. No, we have gone beyond that. We have a general principle that there are regulatory minima and then above that, you know, we reserve the right to push banks to do more, depending on the risks they take and so on. So to give two examples, one, we have actually worked with international colleagues to develop new liquidity principles. That was one of the, I think, real big shortcomings that was made evident in the crisis, that they didn't have enough liquidity, and we have pushed banks to expand their liquidity and we have been pretty successful in doing that.

The other example I would give is that another thing that was illustrated by the crisis was that a lot of the capital, quote-unquote, was not really very high quality. It wasn't of much use when the crisis came. And so, for example, as we have worked with banks in the stress tests or as we work with banks who want to repay TARP, we have put very heavy emphasis on raising new common equity as the highest quality form of capital.

So yes, and every bank is required to do an internal capital assessment that we work with them on to make sure that not only are they meeting all the regulatory minima, but they are prepared for serious stresses that might come down the road.

Senator REED. Can I presume that you would not object to statutory language requiring multiple tests that are readily made and disclosed?

Mr. BERNANKE. Well, I would like to talk to you about exactly what those tests would be. We already have capital and leverage requirements——

Senator REED. No, I would presume they would be the measures which you would agree and your colleagues would agree were appropriate, but they would not be simply one standard. Again, I think some of the problems with the Basel II, particularly, were the ability to rely exclusively on credit ratings for securitized products, many of which the banks were sort of structuring and then buying because they couldn't sell them, but they were AAA-rated, so that was a very low charge on their risk-based capital but inherently very, very risky, as we found out, so——

Mr. BERNANKE. We have been working on the charges and they have been substantially increased. We are currently testing out the implications of that.

On the particular issue of these off-balance sheet vehicles, as you know, the new accounting standards will force banks to consolidate most of those onto their own balance sheet and so they will have to have a full capital charge against them.

Senator REED. And one final question, Mr. Chairman, and that is we have talked a lot about derivatives. We all do recognize there is a long-term value to derivatives. My recollection is the Chicago Board in 1848 started trading agricultural futures. In fact, I think I recall a story where General Grant and General Sherman showed up to congratulate one of the architects for helping them win the Civil War because of being able to guarantee supply. So that is the question of the utility in that sense, and other senses, is not at stake here.

But there also is the growing perception, and I am coming to a conviction, that many times these devices are used to avoid regulatory constraints. In the case of Greece, it might have been strictly legal, but clearly the intent was to avoid the budget limitations and the budget restrictions of joining the European Community.

With respect to many other derivatives, for example, even commercial derivatives, because they are not typically recorded as lending, or in some cases not even on the books, it is borrowing that is not in violation of covenance with other lenders. It is borrowing that allows additional leverage. And one of the problems we are trying to recognize now is over-leverage.

So to the extent that we have to deal with these derivatives, any thoughts our guidance about how we prevent them from being used not for economic hedging but for clearly and very deliberately—maybe legally, maybe not—avoiding your capital requirements, the lending covenants of a bank, and many other examples.

Mr. BERNANKE. Yes. There are two related issues here. One has to do with circumventing accounting rules, which maybe is what Greece is about. After Enron, that turned out to be—a lot of financial arrangements essentially were structured to avoid accounting requirements and we, at that time, the Federal Reserve—not me personally, but the Federal Reserve—came down pretty hard, providing sets of rules and guidances to banks to assure that they were not creating special structures or in order to——

Senator REED. And yet they did.

Mr. BERNANKE.——in order to avoid accounting rules. The Greek thing is from before that period, as far as we know.

Senator REED. Yes.

Mr. BERNANKE. We are looking into that, but as far as we know, that was about 10 years ago that those were done. So that is one set of issues.

The other set of issues has to do with whether hedging, which is in principle a good thing, is actually true hedging or not, and the poster child for that would be the capital hedges that banks took out with AIG which allowed them to reduce their capital standards because they were, quote, protected by the credit default swaps with AIG. And there, the challenge is to make sure that when the hedge takes place, that it is a true hedge and that it doesn't induce other risks, like counterparty risks, for example, or liquidity risks.

So it is a difficult technical problem, but you are absolutely right that derivatives have a legitimate role for hedging risks, but if they are used to distort accounting results or regulatory ratios, then that needs to be addressed. We are working on that as part of the broad reforms that Basel is undertaking.

Senator REED. Thank you very much, Mr. Chairman.

Mr. BERNANKE. Thank you.

Senator REED. Seeing no other members, the hearing is adjourned.

Mr. BERNANKE. Thank you.

[Whereupon, at 11:49 a.m., the hearing was adjourned.]

[Prepared statements and responses to written questions supplied for the record follow:]

PREPARED STATEMENT OF BEN S. BERNANKE

CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

FEBRUARY 25, 2010

Chairman Dodd, Ranking Member Shelby, and other members of the Committee, I am pleased to present the Federal Reserve's semiannual *Monetary Policy Report to the Congress.* I will begin today with some comments on the outlook for the economy and for monetary policy, then touch briefly on several other important issues.

The Economic Outlook

Although the recession officially began more than 2 years ago, U.S. economic activity contracted particularly sharply following the intensification of the global financial crisis in the fall of 2008. Concerted efforts by the Federal Reserve, the Treasury Department, and other U.S. authorities to stabilize the financial system, together with highly stimulative monetary and fiscal policies, helped arrest the decline and are supporting a nascent economic recovery. Indeed, the U.S. economy expanded at about a 4 percent annual rate during the second half of last year. A significant portion of that growth, however, can be attributed to the progress firms made in working down unwanted inventories of unsold goods, which left them more willing to increase production. As the impetus provided by the inventory cycle is temporary, and as the fiscal support for economic growth likely will diminish later this year, a sustained recovery will depend on continued growth in private-sector final demand for goods and services.

Private final demand does seem to be growing at a moderate pace, buoyed in part by a general improvement in financial conditions. In particular, consumer spending has recently picked up, reflecting gains in real disposable income and household wealth and tentative signs of stabilization in the labor market. Business investment in equipment and software has risen significantly. And international trade—supported by a recovery in the economies of many of our trading partners—is rebounding from its deep contraction of a year ago. However, starts of single-family homes, which rose noticeably this past spring, have recently been roughly flat, and commercial construction is declining sharply, reflecting poor fundamentals and continued difficulty in obtaining financing.

The job market has been hit especially hard by the recession, as employers reacted to sharp sales declines and concerns about credit availability by deeply cutting their workforces in late 2008 and in 2009. Some recent indicators suggest the deterioration in the labor market is abating: Job losses have slowed considerably, and the number of full-time jobs in manufacturing rose modestly in January. Initial claims for unemployment insurance have continued to trend lower, and the temporary services industry, often considered a bellwether for the employment outlook, has been expanding steadily since October. Notwithstanding these positive signs, the job market remains quite weak, with the unemployment rate near 10 percent and job openings scarce. Of particular concern, because of its long-term implications for workers' skills and wages, is the increasing incidence of long-term unemployment; indeed, more than 40 percent of the unemployed have been out of work 6 months or more, nearly double the share of a year ago.

Increases in energy prices resulted in a pickup in consumer price inflation in the second half of last year, but oil prices have flattened out over recent months, and most indicators suggest that inflation likely will be subdued for some time. Slack in labor and product markets has reduced wage and price pressures in most markets, and sharp increases in productivity have further reduced producers' unit labor costs. The cost of shelter, which receives a heavy weight in consumer price indexes, is rising very slowly, reflecting high vacancy rates. In addition, according to most measures, longer-term inflation expectations have remained relatively stable.

The improvement in financial markets that began last spring continues. Conditions in short-term funding markets have returned to near pre-crisis levels. Many (mostly larger) firms have been able to issue corporate bonds or new equity and do not seem to be hampered by a lack of credit. In contrast, bank lending continues to contract, reflecting both tightened lending standards and weak demand for credit amid uncertain economic prospects.

In conjunction with the January meeting of the Federal Open Market Committee (FOMC), Board members and Reserve Bank presidents prepared projections for economic growth, unemployment, and inflation for the years 2010 through 2012 and over the longer run. The contours of these forecasts are broadly similar to those I reported to the Congress last July. FOMC participants continue to anticipate a moderate pace of economic recovery, with economic growth of roughly 3 to 3 ½ percent in 2010 and 3 ½ to 4 ½ percent in 2011. Consistent with moderate economic growth, participants expect the unemployment rate to decline only slowly, to a range of roughly 6½ to 7½ percent by the end of 2012, still well above their estimate of the long-run sustainable rate of about 5 percent. Inflation is expected to remain subdued, with consumer prices rising at rates between 1 and 2 percent in 2010 through 2012. In the longer term, inflation is expected to be between 1¾ and 2 percent, the range that most FOMC participants judge to be consistent with the Federal Reserve's dual mandate of price stability and maximum employment.

Monetary Policy

Over the past year, the Federal Reserve has employed a wide array of tools to promote economic recovery and preserve price stability. The target for the Federal funds rate has been maintained at a historically low range of 0 to ¼ percent since December 2008. The FOMC continues to anticipate that economic conditions—including low rates of resource utilization, subdued inflation trends, and stable inflation expectations—are likely to warrant exceptionally low levels of the Federal funds rate for an extended period.

To provide support to mortgage lending and housing markets and to improve overall conditions in private credit markets, the Federal Reserve is in the process of purchasing $1.25 trillion of agency mortgage-backed securities and about $175 billion of agency debt. We have been gradually slowing the pace of these purchases in order to promote a smooth transition in markets and anticipate that these transactions will be completed by the end of March. The FOMC will continue to evaluate its purchases of securities in light of the evolving economic outlook and conditions in financial markets.

In response to the substantial improvements in the functioning of most financial markets, the Federal Reserve is winding down the special liquidity facilities it created during the crisis. On February 1, a number of these facilities, including credit facilities for primary dealers, lending programs intended to help stabilize money market mutual funds and the commercial paper market, and temporary liquidity swap lines with foreign central banks, were allowed to expire.[1] The only remaining lending program for multiple borrowers created under the Federal Reserve's emergency authorities, the Term Asset-Backed Securities Loan Facility, is scheduled to close on March 31 for loans backed by all types of collateral except newly issued commercial mortgage-backed securities (CMBS) and on June 30 for loans backed by newly issued CMBS.

In addition to closing its special facilities, the Federal Reserve is normalizing its lending to commercial banks through the discount window. The final auction of discount-window funds to depositories through the Term Auction Facility, which was created in the early stages of the crisis to improve the liquidity of the banking system, will occur on March 8. Last week we announced that the maximum term of discount window loans, which was increased to as much as 90 days during the crisis, would be returned to overnight for most banks, as it was before the crisis erupted in August 2007. To discourage banks from relying on the discount window rather than private funding markets for short-term credit, last week we also increased the discount rate by 25 basis points, raising the spread between the discount rate and the top of the target range for the Federal funds rate to 50 basis points. These changes, like the closure of most of the special lending facilities earlier this month, are in response to the improved functioning of financial markets, which has reduced the need for extraordinary assistance from the Federal Reserve. These adjustments are not expected to lead to tighter financial conditions for households and businesses and should not be interpreted as signaling any change in the outlook for monetary policy, which remains about the same as it was at the time of the January meeting of the FOMC.

Although the Federal funds rate is likely to remain exceptionally low for an extended period, as the expansion matures, the Federal Reserve will at some point need to begin to tighten monetary conditions to prevent the development of inflationary pressures. Notwithstanding the substantial increase in the size of its balance sheet associated with its purchases of Treasury and agency securities, we are confident that we have the tools we need to firm the stance of monetary policy at the appropriate time.[2]

Most importantly, in October 2008 the Congress gave statutory authority to the Federal Reserve to pay interest on banks' holdings of reserve balances at Federal

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[1] Primary dealers are broker-dealers that act as counterparties to the Federal Reserve Bank of New York in its conduct of open market operations.

[2] For further details on these tools and the Federal Reserve's exit strategy, see Ben S. Bernanke (2010), "Federal Reserve's Exit Strategy," statement before the Committee on Financial Services, U.S. House of Representatives, February 10, *www.federalreserve.gov/newsevents/testimony/bernanke20100210a.htm.*

Reserve Banks. By increasing the interest rate on reserves, the Federal Reserve will be able to put significant upward pressure on all short-term interest rates. Actual and prospective increases in short-term interest rates will be reflected in turn in longer-term interest rates and in financial conditions more generally.

The Federal Reserve has also been developing a number of additional tools to reduce the large quantity of reserves held by the banking system, which will improve the Federal Reserve's control of financial conditions by leading to a tighter relationship between the interest rate paid on reserves and other short-term interest rates. Notably, our operational capacity for conducting reverse repurchase agreements, a tool that the Federal Reserve has historically used to absorb reserves from the banking system, is being expanded so that such transactions can be used to absorb large quantities of reserves.[3] The Federal Reserve is also currently refining plans for a term deposit facility that could convert a portion of depository institutions' holdings of reserve balances into deposits that are less liquid and could not be used to meet reserve requirements.[4] In addition, the FOMC has the option of redeeming or selling securities as a means of reducing outstanding bank reserves and applying monetary restraint. Of course, the sequencing of steps and the combination of tools that the Federal Reserve uses as it exits from its currently very accommodative policy stance will depend on economic and financial developments. I provided more discussion of these options and possible sequencing in a recent testimony.[5]

Federal Reserve Transparency

The Federal Reserve is committed to ensuring that the Congress and the public have all the information needed to understand our decisions and to be assured of the integrity of our operations. Indeed, on matters related to the conduct of monetary policy, the Federal Reserve is already one of the most transparent central banks in the world, providing detailed records and explanations of its decisions. Over the past year, the Federal Reserve also took a number of steps to enhance the transparency of its special credit and liquidity facilities, including the provision of regular, extensive reports to the Congress and the public; and we have worked closely with the Government Accountability Office (GAO), the Office of the Special Inspector General for the Troubled Asset Relief Program, the Congress, and private-sector auditors on a range of matters relating to these facilities.

While the emergency credit and liquidity facilities were important tools for implementing monetary policy during the crisis, we understand that the unusual nature of those facilities creates a special obligation to assure the Congress and the public of the integrity of their operation. Accordingly, we would welcome a review by the GAO of the Federal Reserve's management of all facilities created under emergency authorities.[6] In particular, we would support legislation authorizing the GAO to audit the operational integrity, collateral policies, use of third-party contractors, accounting, financial reporting, and internal controls of these special credit and liquidity facilities. The Federal Reserve will, of course, cooperate fully and actively in all reviews. We are also prepared to support legislation that would require the release of the identities of the firms that participated in each special facility after an appropriate delay. It is important that the release occur after a lag that is sufficiently long that investors will not view an institution's use of one of the facilities as a possible indication of ongoing financial problems, thereby undermining market con-

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[3] The Federal Reserve has recently developed the ability to engage in reverse repurchase agreements in the triparty market for repurchase agreements, with primary dealers as counterparties and using Treasury and agency debt securities as collateral, and it is developing the capacity to carry out these transactions with a wider set of counterparties (such as money market mutual funds and the mortgage-related government-sponsored enterprises) and using agency mortgage-backed securities as collateral.

[4] In December the Federal Reserve published a proposal describing a term deposit facility in the *Federal Register* (see Board of Governors of the Federal Reserve System (2009), "Federal Reserve Board Proposes Amendments to Regulation D That Would Enable the Establishment of a Term Deposit Facility," press release, December 28, *www.federalreserve.gov/newsevents/press/monetary/20091228a.htm)* We are now in the process of analyzing the public comments that have been received. A revised proposal will be reviewed by the Federal Reserve Board, and test transactions could commence during the second quarter.

[5] See Bernanke, "Federal Reserve's Exit Strategy," in note 2.

[6] Last month the Federal Reserve said that it would welcome a full review by the GAO of all aspects of the Federal Reserve's involvement in the extension of credit to the American International Group, Inc. (see Ben S. Bernanke (2010), letter to Gene L. Dodaro, January 19, *www.federalreserve.gov/monetarypolicy/files/letter_aig_20100119.pdf).* The Federal Reserve would support legislation authorizing a review by the GAO of the Federal Reserve's operations of its facilities created under emergency authorities: the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, the Commercial Paper Funding Facility, the Money Market Investor Funding Facility, the Primary Dealer Credit Facility, the Term Asset-Backed Securities Loan Facility, and the Term Securities Lending Facility.

fidence in the institution or discouraging use of any future facility that might become necessary to protect the U.S. economy. An appropriate delay would also allow firms adequate time to inform investors through annual reports and other public documents of their use of Federal Reserve facilities.

Looking ahead, we will continue to work with the Congress in identifying approaches for enhancing the Federal Reserve's transparency that are consistent with our statutory objectives of fostering maximum employment and price stability. In particular, it is vital that the conduct of monetary policy continue to be insulated from short-term political pressures so that the FOMC can make policy decisions in the longer-term economic interests of the American people. Moreover, the confidentiality of discount window lending to individual depository institutions must be maintained so that the Federal Reserve continues to have effective ways to provide liquidity to depository institutions under circumstances where other sources of funding are not available. The Federal Reserve's ability to inject liquidity into the financial system is critical for preserving financial stability and for supporting depositories' key role in meeting the ongoing credit needs of firms and households.

Regulatory Reform

Strengthening our financial regulatory system is essential for the long-term economic stability of the nation. Among the lessons of the crisis are the crucial importance of macroprudential regulation—that is, regulation and supervision aimed at addressing risks to the financial system as a whole—and the need for effective consolidated supervision of every financial institution that is so large or interconnected that its failure could threaten the functioning of the entire financial system.

The Federal Reserve strongly supports the Congress's ongoing efforts to achieve comprehensive financial reform. In the meantime, to strengthen the Federal Reserve's oversight of banking organizations, we have been conducting an intensive self-examination of our regulatory and supervisory responsibilities and have been actively implementing improvements. For example, the Federal Reserve has been playing a key role in international efforts to toughen capital and liquidity requirements for financial institutions, particularly systemically critical firms, and we have been taking the lead in ensuring that compensation structures at banking organizations provide appropriate incentives without encouraging excessive risk-taking.[7]

The Federal Reserve is also making fundamental changes in its supervision of large, complex bank holding companies, both to improve the effectiveness of consolidated supervision and to incorporate a macroprudential perspective that goes beyond the traditional focus on safety and soundness of individual institutions. We are overhauling our supervisory framework and procedures to improve coordination within our own supervisory staff and with other supervisory agencies and to facilitate more-integrated assessments of risks within each holding company and across groups of companies.

Last spring the Federal Reserve led the successful Supervisory Capital Assessment Program, popularly known as the bank stress tests. An important lesson of that program was that combining onsite bank examinations with a suite of quantitative and analytical tools can greatly improve comparability of the results and better identify potential risks. In that spirit, the Federal Reserve is also in the process of developing an enhanced quantitative surveillance program for large bank holding companies. Supervisory information will be combined with firm-level, market-based indicators and aggregate economic data to provide a more complete picture of the risks facing these institutions and the broader financial system. Making use of the Federal Reserve's unparalleled breadth of expertise, this program will apply a multidisciplinary approach that involves economists, specialists in particular financial markets, payments systems experts, and other professionals, as well as bank supervisors.

The recent crisis has also underscored the extent to which direct involvement in the oversight of banks and bank holding companies contributes to the Federal Reserve's effectiveness in carrying out its responsibilities as a central bank, including the making of monetary policy and the management of the discount window. Most important, as the crisis has once again demonstrated, the Federal Reserve's ability to identify and address diverse and hard-to-predict threats to financial stability depends critically on the information, expertise, and powers that it has by virtue of being both a bank supervisor and a central bank.

The Federal Reserve continues to demonstrate its commitment to strengthening consumer protections in the financial services arena. Since the time of the previous

[7] For further information, see Board of Governors of the Federal Reserve System (2009), "Federal Reserve Issues Proposed Guidance on Incentive Compensation," press release, October 22, *www.federalreserve.gov/newsevents/press/bcreg/20091022a.htm.*

Monetary Policy Report in July, the Federal Reserve has proposed a comprehensive overhaul of the regulations governing consumer mortgage transactions, and we are collaborating with the Department of Housing and Urban Development to assess how we might further increase transparency in the mortgage process.[8] We have issued rules implementing enhanced consumer protections for credit card accounts and private student loans as well as new rules to ensure that consumers have meaningful opportunities to avoid overdraft fees.[9] In addition, the Federal Reserve has implemented an expanded consumer compliance supervision program for nonbank subsidiaries of bank holding companies and foreign banking organizations.[10]

More generally, the Federal Reserve is committed to doing all that can be done to ensure that our economy is never again devastated by a financial collapse. We look forward to working with the Congress to develop effective and comprehensive reform of the financial regulatory framework.

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[8] For further information, see Board of Governors of the Federal Reserve System (2009), "Federal Reserve Proposes Significant Changes to Regulation Z (Truth in Lending) Intended to Improve the Disclosures Consumers Receive in Connection with Closed-End Mortgages and Home-Equity Lines of Credit," press release, July 23, *www.federalreserve.gov/newsevents/press/bcreg/20090723a.htm.*

[9] For more information, see Board of Governors of the Federal Reserve System (2009), "Federal Reserve Approves Final Amendments to Regulation Z That Revise Disclosure Requirements for Private Education Loans," press release, July 30, *www.federalreserve.gov/newsevents/press/bcreg/20090730a.htm;* Board of Governors of the Federal Reserve System (2009), "Federal Reserve Announces Final Rules Prohibiting Institutions from Charging Fees for Overdrafts on ATM and One-Time Debit Card Transactions," press release, November 12, *www.federalreserve.gov/newsevents/press/bcreg/20091112a.htm;* and Board of Governors of the Federal Reserve System (2010), "Federal Reserve Approves Final Rules to Protect Credit Card Users from a Number of Costly Practices," press release, January 12, *www.federalreserve.gov/newsevents/press/bcreg/20100112a.htm.*

[10] For further information, see Board of Governors of the Federal Reserve System (2009), "Federal Reserve to Implement Consumer Compliance Supervision Program of Nonbank Subsidiaries of Bank Holding Companies and Foreign Banking Organizations," press release, September 15, *www.federalreserve.gov/newsevents/press/bcreg/20090915a.htm.*

Monetary Policy Report to the Congress

Submitted pursuant to section 2B of the Federal Reserve Act

February 24, 2010

Board of Governors of the Federal Reserve System

Letter of Transmittal

Board of Governors of the
Federal Reserve System

Washington, D.C., February 24, 2010

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

Contents

Part 1
Overview: Monetary Policy and the Economic Outlook

After declining for a year and a half, economic activity in the United States turned up in the second half of 2009, supported by an improvement in financial conditions, stimulus from monetary and fiscal policies, and a recovery in foreign economies. These factors, along with increased business and household confidence, appear likely to boost spending and sustain the economic expansion. However, the pace of the recovery probably will be tempered by households' desire to rebuild wealth, still-tight credit conditions facing some borrowers, and, despite some tentative signs of stabilization, continued weakness in labor markets. With substantial resource slack continuing to suppress cost pressures and with longer-term inflation expectations stable, inflation is likely to be subdued for some time.

U.S. real gross domestic product (GDP) rose at about a 4 percent pace, on average, over the second half of 2009. Consumer spending—which was boosted by supportive monetary and fiscal policies—posted solid increases, though it remained well below its pre-recession level. Meanwhile, activity in the housing market, which began to pick up last spring, flattened over the second half of 2009. In the business sector, investment in equipment and software posted a sizable gain in the second half of last year, likely reflecting improved conditions in capital markets and brighter sales prospects. In addition, firms reduced the pace of inventory liquidation markedly in the fourth quarter. In contrast, investment in nonresidential structures continued to contract. With the recovery in U.S. and foreign demand, U.S. trade flows rebounded in the second half of 2009 after precipitous declines late in 2008 and early in 2009. Nevertheless, both exports and imports stayed considerably below their earlier peaks.

Despite the pickup in output, employment continued to contract in the second half of 2009, albeit at a markedly slower pace than in the first half. The unemployment rate rose further during the second half, reaching 10 percent by the end of the year—its highest level since the early 1980s—before dropping back in January. Although job losses have slowed, hiring remains weak, and the median duration of unemployment has lengthened significantly.

Headline consumer price inflation picked up in 2009 as energy prices rose sharply: Over the 12 months ending in December, prices for personal consumption expenditures (PCE) increased about 2 percent, up from ½ percent in 2008. In contrast, price increases for consumer expenditures other than food and energy items—so-called core PCE—slowed noticeably last year. After rising at an annual rate of about 1¾ percent in 2008 and the first half of 2009, core PCE prices increased at an annual rate of just over 1 percent in the second half of the year.

The recovery in financial markets that began last spring continued through the second half of the year and into 2010. Broad equity price indexes increased further, on balance, and risk spreads on corporate bonds narrowed considerably. Conditions in short-term funding markets returned to near pre-crisis levels; liquidity and pricing in bank funding markets continued to normalize, while risk spreads in the commercial paper market were stable at the low end of the range observed since the fall of 2007. The functioning of financial markets more generally improved further.

Investors became more optimistic about the outlook for financial institutions during the first half of last year. That development was bolstered by the release of the results of the Supervisory Capital Assessment Program (SCAP), which were seen as helping clarify the financial conditions of the largest bank holding companies and provided investors with greater assurance about the health of the institutions. Sentiment rose further over the remainder of the year as investors became more optimistic about the economic outlook. Most of the 19 bank holding companies included in the SCAP issued equity, some to augment or improve the quality of their capital and some to repay investments made by the Treasury under the Troubled Asset Relief Program. Still, delinquency and charge-off rates at commercial banks increased further in the second half of the year, and loan losses remained very high.

Nonfinancial firms with access to capital markets took advantage of the improvement in financial conditions to issue corporate bonds and equity shares at a solid pace; a significant portion of issuance likely reflected an effort by businesses to substitute attractively priced longer-term financing for shorter-term debt. In contrast, many small businesses and other firms that depend largely on banks to meet their funding needs found their access to credit severely restricted; banks continued to tighten their lending standards and terms, though to a more limited extent, during the second half of 2009 amid higher loan losses on their commercial loans and reports of lingering uncertainty about business credit quality. According to survey data, demand for business loans was also weak throughout 2009.

Availability of credit for households remained constrained in the second half of 2009, even as interest rates declined for mortgages and many consumer loans. Restrictive bank lending policies to individuals likely were due importantly to banks' concerns about the ability of households to repay loans in an environment of high unemployment and continued softness in house prices. In addition, senior bank loan officers reported weakening loan demand from households throughout 2009. However, in part because of support from the Federal Reserve's Term Asset-Backed Securities Loan Facility, the consumer asset-backed securities market, which is an important funding source for consumer loans, improved. All told, in 2009 nominal household debt experienced its first annual decline since the beginning of the data series in 1951.

The Federal Reserve continued to support the functioning of financial markets and promote recovery in economic activity using a wide array of tools. The Federal Open Market Committee (FOMC) maintained a target range of 0 to ¼ percent for the federal funds rate throughout the second half of 2009 and early 2010 and indicated that economic conditions were likely to warrant exceptionally low levels of the federal funds rate for an extended period. Further, the Federal Reserve continued its purchases of Treasury securities, agency mortgage-backed securities (MBS), and agency debt in order to provide support to mortgage and housing markets and to improve overall conditions in private credit markets. To promote a smooth transition in financial markets as the acquisitions are completed, the Federal Reserve gradually slowed the pace of these purchases in late 2009 and early 2010. The planned acquisitions of $300 billion of Treasury securities were completed by October, while the purchases of $1.25 trillion of MBS and about $175 billion of agency debt are expected to be finished by the end of the first quarter of this year.

In light of the improved functioning of financial markets, the Federal Reserve removed some of the extraordinary support it had provided during the crisis and closed many of its special liquidity facilities and the temporary liquidity swap arrangements with other central banks in the fall of 2009 and early in 2010. The Federal Reserve also began to normalize its lending to commercial banks through the discount window by reducing the maximum maturity of loans extended through the primary credit facility from 90 days to 28 days, effective on January 14, and by announcing that the maturity of those loans will be reduced further to overnight, effective on March 18. The rate charged on primary credit loans was increased from ½ percent to ¾ percent effective February 19. In addition, the Federal Reserve announced that the final auction under the Term Auction Facility will occur in March and later noted that the minimum bid rate for that auction had been increased by ¼ percentage point to ½ percent. Overall, the size of the Federal Reserve's balance sheet increased from about $2 trillion in the summer of 2009 to about $2.3 trillion on February 17, 2010. The composition of the balance sheet continued to shift as a considerable decline in credit extended through various facilities was more than offset by the increase in securities held outright. The Federal Reserve continued to broaden its efforts to provide even more information to the public regarding its conduct of these programs and of monetary policy (see box in Part 3).

The Federal Reserve is taking steps to ensure that it will be able to smoothly withdraw extraordinary policy accommodation when appropriate. Because the Federal Reserve, under the statutory authority provided by the Congress in October 2008, pays interest on the balances depository institutions hold at Reserve Banks, it can put upward pressure on short-term interest rates even with an extraordinarily large volume of reserves in the banking system by raising the interest rate paid on such balances. In addition, the Federal Reserve has continued to develop several other tools that it could use to reinforce the effects of increases in the interest rate on balances at Reserve Banks. In particular, the Federal Reserve has tested its ability to execute reverse repurchase agreements (reverse repos) in the triparty repo market with primary dealers using both Treasury and agency debt as collateral, and it is developing the capability to conduct such transactions with other counterparties and against agency MBS. The Federal Reserve has also announced plans for implementing a term deposit facility. In addition, it has the option of redeeming or selling assets in order to reduce monetary policy accommodation.

In conjunction with the January 2010 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. FOMC participants agreed that economic recovery from the recent recession was under way, but that they expected it to proceed at a gradual pace, restrained in part by household and business uncertainty regarding the economic outlook, modest improvement in labor markets, and slow easing of credit conditions in the banking sector. Participants expected that real GDP would expand at a rate that was only moderately above its longer-run sustainable growth rate and that the unemployment rate would decline only slowly over the next few years. Most participants also anticipated that inflation would remain subdued over this period.

Nearly all participants judged the risks to their growth outlook as generally balanced, and most also saw roughly balanced risks surrounding their inflation projections. Participants continued to judge the uncertainty surrounding their projections for economic activity and inflation as unusually high relative to historical norms. Participants also reported their assessments of the rates to which key macroeconomic variables would be expected to converge in 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 to 2.8 percent for real GDP growth, 5.0 to 5.2 percent for the unemployment rate, and 1.7 to 2.0 percent for the inflation rate.

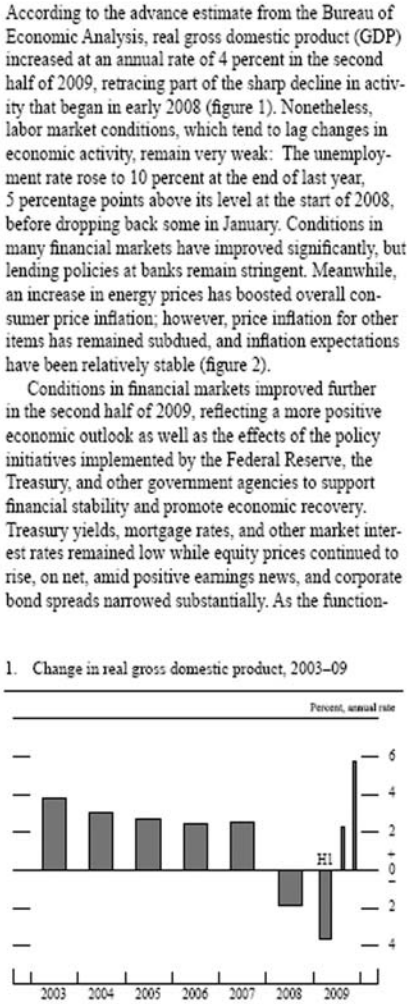
Part 2
Recent Financial and Economic Developments

According to the advance estimate from the Bureau of Economic Analysis, real gross domestic product (GDP) increased at an annual rate of 4 percent in the second half of 2009, retracing part of the sharp decline in activity that began in early 2008 (figure 1). Nonetheless, labor market conditions, which tend to lag changes in economic activity, remain very weak: The unemployment rate rose to 10 percent at the end of last year, 5 percentage points above its level at the start of 2008, before dropping back some in January. Conditions in many financial markets have improved significantly, but lending policies at banks remain stringent. Meanwhile, an increase in energy prices has boosted overall consumer price inflation; however, price inflation for other items has remained subdued, and inflation expectations have been relatively stable (figure 2).

Conditions in financial markets improved further in the second half of 2009, reflecting a more positive economic outlook as well as the effects of the policy initiatives implemented by the Federal Reserve, the Treasury, and other government agencies to support financial stability and promote economic recovery. Treasury yields, mortgage rates, and other market interest rates remained low while equity prices continued to rise, on net, amid positive earnings news, and corporate bond spreads narrowed substantially. As the functioning of short-term funding markets improved further, the usage of special liquidity facilities declined sharply, and the Federal Reserve closed several of those facilities on February 1, 2010.[1] Investors also seemed to become more optimistic about the prospects for the banking sector, and many of the largest banking institutions issued equity and repaid investments made by the Treasury under the Troubled Asset Relief Program (TARP). Nevertheless, the credit quality of bank loan portfolios remained a concern, particularly for loans secured by commercial and residential real estate loans.

Private domestic nonfinancial sector debt contracted, on balance, in the second half of 2009. On the positive side, firms with access to capital markets issued corporate bonds at a robust pace, with many firms reportedly seeking to lock in long-term, low-interest-rate debt or refinance other debt. By contrast, many small businesses and other firms that depend primarily on banks for their funding needs faced substantial constraints on their access to credit even as demand for such credit remained weak. In the household sector, demand for

1. Change in real gross domestic product, 2003–09



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, 2003–09

NOTE: The data are monthly and extend through December 2009; changes are from one year earlier.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

1. Specifically, the Primary Dealer Credit Facility, the Term Securities Lending Facility, the Commercial Paper Funding Facility, the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, and the temporary swap lines with foreign central banks were closed.

credit was weak, and supply conditions remained tight, as banks maintained stringent lending standards for both consumer loans and residential real estate loans. However, issuance of asset-backed securities (ABS), which are an important source of funding for consumer loans, strengthened, supported in part by the Federal Reserve's Term Asset-Backed Securities Loan Facility (TALF).

Domestic Developments

The Household Sector

Residential Investment and Housing Finance

The housing market began to recover in the spring of 2009, but the pace of improvement slowed during the second half of the year. After having increased almost 30 percent through mid-2009, sales of new single-family homes retraced about one-half of that gain in the second half of the year. And, although sales of existing single-family homes moved up noticeably through November, they fell back sharply in December, suggesting that some of the earlier strength reflected sales that had been pulled forward in anticipation of the expiration of the first-time homebuyer tax credit.[2] The index of pending home sales, a leading indicator of sales of existing homes, leveled off in December after November's steep decline.

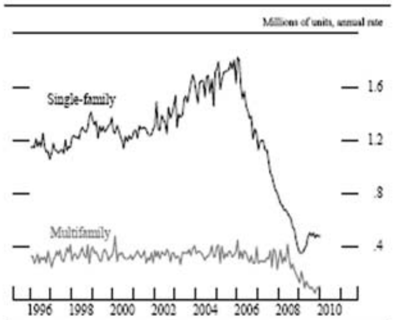
The recovery in construction activity in the single-family sector also decelerated in the second half of 2009. After stepping up noticeably last spring from an exceptionally low level, starts of single-family homes were about flat, on average, from June to December (figure 3). With the level of construction remaining quite low, the inventory of unsold new homes fell sharply and is now less than one-half of the peak reached in 2006. In the much smaller multifamily sector—where tight credit conditions and high vacancies have depressed building—starts deteriorated a bit further in the second half of the year.

After falling sharply for about two and a half years, house prices, as measured by a number of national indexes, were more stable in the second half of 2009 (figure 4). One house price measure with wide geographic coverage—the LoanPerformance repeat-sales index—is up, on net, from its trough earlier in the year, even though the last few readings of that index fell back a bit. According to the Thomson Reuters/University of Michigan Surveys of Consumers, the number of respondents who expect house prices to increase over the next 12 months has moved up and now slightly exceeds the number of respondents who expect prices to decrease.[3]

2. The first-time homebuyer tax credit, which was enacted in February 2009 as part of the American Recovery and Reinvestment Act, was originally scheduled to expire on November 30, 2009. In early November, however, the Congress extended the credit to sales occurring through April 30, 2010, and expanded it to include repeat homebuyers who have owned and occupied a house for at least five of the past eight years.

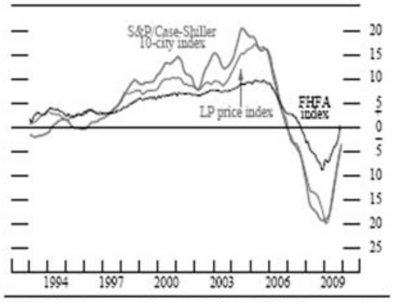
3. The survey, formerly the Reuters/University of Michigan Surveys of Consumers, was renamed the Thomson Reuters/University of Michigan Surveys of Consumers as of January 1, 2010.

3. Private housing starts, 1996–2010



Note: The data are monthly and extend through January 2010.
Source: Department of Commerce, Bureau of the Census.

4. Change in prices of existing single-family houses, 1993–2009



Note: The data are monthly and extend into 2009: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, Standard & Poor's.

The earlier declines in house prices in combination with the low level of mortgage rates have made housing more affordable, and the apparent stabilization in prices may bring into the market buyers who were reluctant to purchase a home when prices were perceived to be falling. That said, the still-substantial inventory of unsold homes, including foreclosed homes, has continued to weigh on the market.

Even with house prices showing signs of stabilization, home values remained well below the remaining amount of principal on mortgages (so-called underwater loans) for many borrowers in the second half of 2009. Against this backdrop, and with a very high unemployment rate, delinquency rates on all types of residential mortgages continued to move higher (figure 5). As of December, serious delinquency rates on prime and near-prime loans had climbed to 16 percent for variable-rate loans and to over 5 percent for fixed rate loans.[4] The delinquency rate on all subprime loans was about 35 percent in December. Loans backed by the Federal Housing Administration (FHA) also showed increasing strains, with delinquency rates moving up to 9 percent at the end of 2009.

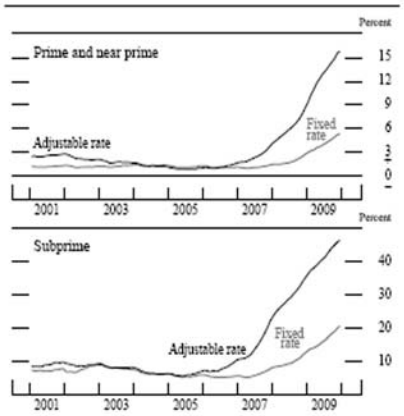
Foreclosures remained exceptionally elevated in the second half of 2009. About 1.4 million homes entered foreclosure during that period, similar to the pace earlier in the year. Historically, about one-half of foreclosure starts have resulted in homeowners losing the home. The heightened level of foreclosures has been particularly notable among prime borrowers, for whom the number of foreclosure starts moved up a bit in the second half of the year; by contrast foreclosure starts for subprime borrowers dropped back somewhat. To address the foreclosure problem, the Treasury has intensified efforts through its Making Home Affordable program to encourage loan modifications and to allow borrowers to refinance into mortgages with more-affordable payments.

Interest rates on 30-year fixed-rate conforming mortgages moved down in the second half of 2009, and despite a modest upturn around the start of 2010, they remained near the lowest levels on record (figure 6).[5] The low mortgage rates reflected the generally low level of Treasury yields and the large purchases of agency mortgage-backed securities (MBS) by the Federal Reserve, which were reportedly an important factor behind the narrow spread between these conforming mortgage rates and yields on Treasury securities. Interest rates on nonconforming mortgages, which are not included in the mortgage pools backing MBS that are eligible for purchase by the Federal Reserve,

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

5. 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 in size 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 the area's median house price, and it cannot exceed $729,750.

5. Mortgage delinquency rates, 2001–09



Note: The data are monthly and extend through December 2009. Delinquency rate is the percent of loans 90 days or more past due or in foreclosure.

Source: For subprime, LoanPerformance, a division of First American CoreLogic; for prime and near prime, Lender Processing Services, Inc.

6. Mortgage interest rates, 1993–2010

Note: The data, which are weekly and extend through February 17, 2010, are contract rates on 30-year mortgages.

Source: Federal Home Loan Mortgage Corporation.

also generally declined, but the spreads between nonconforming mortgage rates and rates on conforming mortgages remained wide by historical standards.

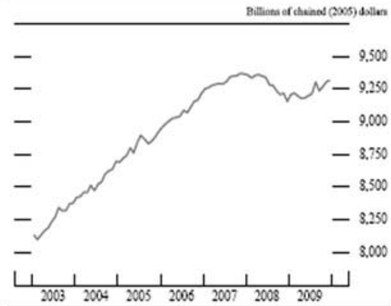
Although mortgage rates fell to low levels, the availability of mortgage financing continued to be sharply constrained. Respondents to the Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS) indicated throughout 2009 that banks continued to tighten their lending standards for all types of mortgage loans, though smaller net fractions reported doing so in the January 2010 survey than had been the case in earlier surveys. Lenders' reluctance to extend mortgage credit in an environment of declining home values also likely held down refinancing activity, which remained subdued in the second half of 2009 even though mortgage rates decreased. The FHA announced that it was raising mortgage insurance premiums because its capital reserve ratio had fallen below the required threshold; at the same time, the FHA announced that it was increasing down-payment requirements for borrowers with very low credit scores. In recent years, the FHA has assumed a greater role in mortgage markets, especially for borrowers with high loan-to-value ratios or lower credit quality. Overall, residential mortgage debt outstanding contracted at an even faster pace in the second half than in the first half of the year. Net issuance of MBS by Fannie Mae, Freddie Mac, and Ginnie Mae, although brisk in the second half of 2009, was down a bit from the levels seen earlier in the year. The securitization market for mortgage loans not guaranteed by a housing-related government-sponsored enterprise (GSE) or the FHA remained closed.

Consumer Spending and Household Finance

After having been roughly constant in the first half of last year, real personal consumption expenditures (PCE) rose at an annual rate of about 2½ percent in the second half (figure 7). Sales of new light motor vehicles jumped from an average annual rate of 9½ million units in the first half of 2009 to a rate of 11¼ million units in the second half.[6] Part of this rebound likely reflected the "cash for clunkers" program, but even after the expiration of that program, sales remained close to 11 million units, supported in part by improved credit conditions for auto buyers as the ABS market revived. Real spending on goods excluding motor vehicles also increased at a robust pace in the second half of the year, while real outlays for services rose more modestly.

6. Sales dropped back in January, but the decline occurred largely at Toyota, which was confronted by widely publicized problems.

7. Real personal consumption expenditures, 2003–09



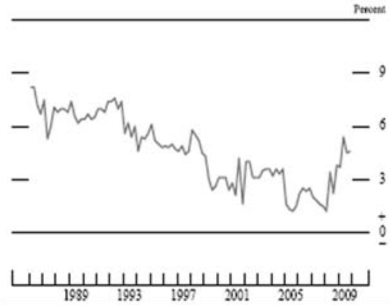
NOTE: The data are monthly and extend through December 2009.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

The rise in consumer spending in 2009 was buoyed by improvements in some of its underlying determinants: Equity prices moved up from their lows reached last March, a development that helped to rebuild household wealth, and household income was lifted by provisions in the fiscal stimulus package. Accordingly, consumer sentiment has rebounded from the very low levels seen earlier in 2009, though it remains low by historical standards (figure 8). Consumer spending appears to have been financed largely out of current income over the past year, and households were also able to increase their personal saving and begin

8. Consumer sentiment, 1996–2010

NOTE: The Conference Board data are monthly and extend through January 2010. The Thomson Reuters/Michigan data are monthly and extend through a preliminary estimate for February 2010; the survey in which the data are collected, formerly the Reuters/University of Michigan Surveys of Consumers, was renamed the Thomson Reuters/University of Michigan Surveys of Consumers as of January 1, 2010.
SOURCE: The Conference Board and Thomson Reuters/University of Michigan Surveys of Consumers.

9. Personal saving rate, 1986–2009



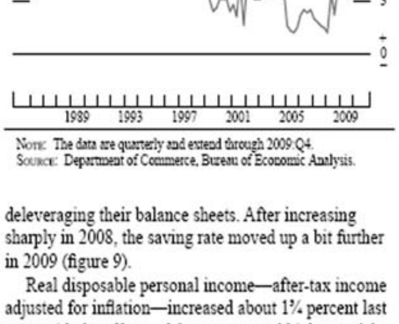
NOTE: The data are quarterly and extend through 2009:Q4.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

deleveraging their balance sheets. After increasing sharply in 2008, the saving rate moved up a bit further in 2009 (figure 9).

Real disposable personal income—after-tax income adjusted for inflation—increased about 1¾ percent last year, with the effects of the tax cuts and higher social benefit payments included in the 2009 fiscal stimulus package accounting for most of the increase.[7] Real labor income—that is, total wages, salaries, and employee benefits, adjusted for inflation—fell sharply in the first half of the 2009, and edged down a bit further in the second half, as the decline in total employee work hours more than offset an increase in real hourly compensation (figure 10).

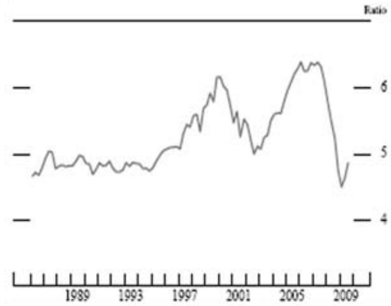
7. The increases in benefit payments under the American Recovery and Reinvestment Act included an expansion of unemployment benefits, increases in food stamps and Pell grants, subsidies for health insurance coverage for the unemployed, and a one-time $250 payment to retirees and veterans.

10. Change in real income and in real wage and salary disbursements, 2003–09



SOURCE: Department of Commerce, Bureau of Economic Analysis.

11. Wealth-to-income ratio, 1986–2009



NOTE: The data are quarterly and extend through 2009: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.

After dropping during the preceding 2½ years, household net worth turned up in the second and third quarters of 2009 and likely rose further in the fourth quarter. Much of the recovery reflected a rebound in equity prices, although the modest gain, on net, in the value of owner-occupied real estate also contributed. With the rise in net worth, the ratio of household wealth to disposable income increased in the second half of the year to about its historical average (figure 11).

Households began to deleverage around the third quarter of 2008, at the height of the financial crisis, and that process continued during the second half of 2009. The decline in nonmortgage consumer debt intensified during the latter part of last year. The contraction was most pronounced in revolving credit, which fell at about a 10 percent annual rate during the second half of 2009. Nonrevolving credit also decreased. Including the drop in mortgage debt, the Federal Reserve's flow of funds data indicate that total household debt declined in 2009 for the first time since the data series began in 1951. Reflecting these developments, debt service payments—the required principal and interest on existing mortgages and consumer debt—fell as a share of disposable income. At the end of the third quarter, the ratio of debt service payments to disposable income had declined to its lowest level since 2001 (figure 12).

Results from the recent SLOOS suggest that the contraction in consumer credit has been the result of both weak demand and tight supply. A net fraction of about one-third of the bank loan officers that responded to the

12. Household debt service, 1980–2009

NOTE: The data are quarterly and extend through 2009:Q3. Debt service payments consist of estimated required payments on outstanding mortgage and consumer debt.
SOURCE: Federal Reserve Board, "Household Debt Service and Financial Obligations Ratios," statistical release.

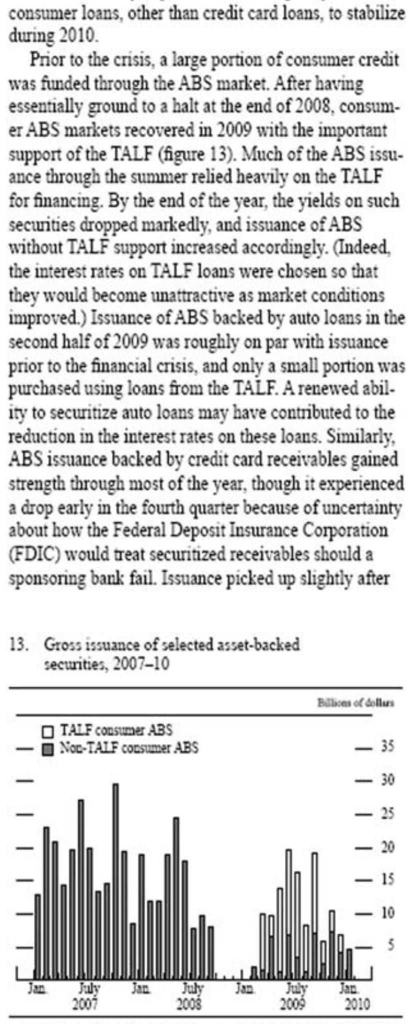
January SLOOS reported weaker demand for all types of consumer loans. The same survey also indicated that banks continued to tighten terms on credit card loans over the final three months of 2009 by reducing credit limits and raising interest rates charged, though smaller net fractions reported doing so than in previous surveys. After having been tightened significantly in the summer and fall of 2009, standards and terms on consumer loans other than credit card loans were little changed, on balance, in the January survey.

Changes in interest rates on consumer loans were mixed during the second half of 2009. Interest rates on new auto loans generally continued to trend lower, and spreads on these loans relative to comparable-maturity Treasury securities narrowed further. Interest rates on credit card loans, however, jumped near midyear and increased further toward year-end. According to the October SLOOS, some of the increases in credit card interest rates and the tightening of other lending terms reflected adjustments made by banks in anticipation of the imposition of new rules under the Credit Card Accountability Responsibility and Disclosure (Credit CARD) Act.[8]

Concerns about the ability of households to repay loans may also have contributed to the tightening of lending policies for consumer credit over the second half of 2009. Delinquency rates on auto loans at captive finance companies remained elevated, and credit card delinquency rates at commercial banks stayed high at around 6½ percent in the fourth quarter of 2009. In addition, the pace at which lenders were charging off these loans increased sharply in recent quarters. On a more positive note, respondents to the January SLOOS indicated that they expected the credit quality of their consumer loans, other than credit card loans, to stabilize during 2010.

Prior to the crisis, a large portion of consumer credit was funded through the ABS market. After having essentially ground to a halt at the end of 2008, consumer ABS markets recovered in 2009 with the important support of the TALF (figure 13). Much of the ABS issuance through the summer relied heavily on the TALF for financing. By the end of the year, the yields on such securities dropped markedly, and issuance of ABS without TALF support increased accordingly. (Indeed, the interest rates on TALF loans were chosen so that they would become unattractive as market conditions improved.) Issuance of ABS backed by auto loans in the second half of 2009 was roughly on par with issuance prior to the financial crisis, and only a small portion was purchased using loans from the TALF. A renewed ability to securitize auto loans may have contributed to the reduction in the interest rates on these loans. Similarly, ABS issuance backed by credit card receivables gained strength through most of the year, though it experienced a drop early in the fourth quarter because of uncertainty about how the Federal Deposit Insurance Corporation (FDIC) would treat securitized receivables should a sponsoring bank fail. Issuance picked up slightly after

13. Gross issuance of selected asset-backed securities, 2007–10



NOTE: Consumer ABS (asset-backed securities) are securities backed by credit card loans, nonrevolving consumer loans, and auto loans. Data for consumer ABS show gross issuance facilitated by the Term Asset-Backed Securities Loan Facility (TALF) and such issuance outside the TALF.
SOURCE: Bloomberg and the Federal Reserve Bank of New York.

8. The Credit CARD Act includes some provisions that place restrictions on issuers' ability to impose certain fees and to engage in risk-based pricing. Some provisions took effect in August 2009, and others did so in February 2010.

the FDIC provided a temporary extension of safe-harbor rules for its handling of securitized assets in a receivership. By contrast, issuance of ABS backed by private student loans remained almost entirely dependent on financing from the TALF.

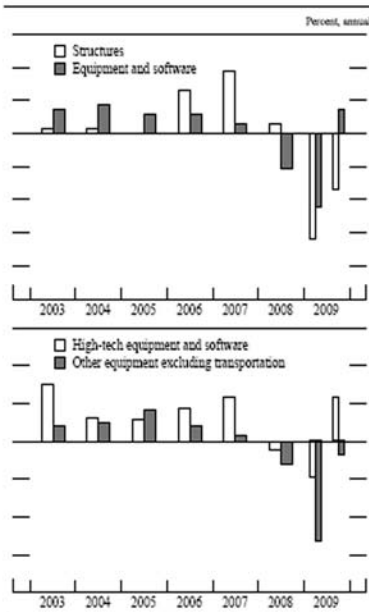
The Business Sector

Fixed Investment

After falling throughout 2008 and the first half of 2009, business spending on equipment and software (E&S) began to expand in the second half of last year, as sales prospects picked up, corporate profits increased, and financial conditions for many businesses (especially those with direct access to capital markets) improved (figure 14). Business outlays on transportation equipment rose sharply in the second half as firms rebuilt their fleets of light motor vehicles and accelerated their purchases of large trucks in advance of new environmental regulations on diesel engines. Real spending on information technology capital—computers, software, and communications equipment—also accelerated toward the end of 2009, likely boosted by the desire to replace older, less-efficient equipment. Investment in equipment other than information processing and transportation, which accounts for nearly one-half of E&S outlays, continued to fall during the second half of 2009, but much more slowly than earlier in the year. More recently, orders of nondefense capital goods other than transportation items posted a second strong monthly increase in December, and recent surveys of business conditions have been more upbeat than in several years.

In contrast to the upturn in equipment investment, real spending on nonresidential structures continued to decline steeply throughout 2009. Real outlays for construction of structures other than those used for drilling and mining fell at an annual rate of 25 percent in the second half of 2009, likely reflecting the drag from rising vacancy rates and plunging property prices for commercial and office buildings, as well as difficult financing conditions for new projects. Following a steep drop in the first half of the year, real spending on drilling and mining structures increased sharply in the second half, likely in response to the rebound in oil prices.

14. Change in real business fixed investment, 2003–09

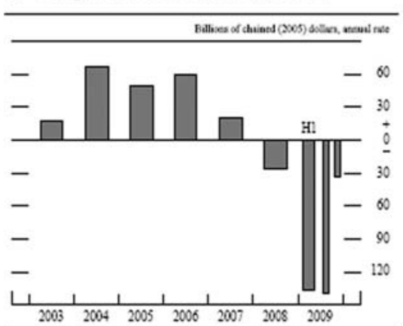


NOTE: High-tech equipment consists of computers and peripheral equipment and communications equipment.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Inventory Investment

After running off inventories aggressively during the first three quarters of 2009, firms moved to stem the pace of liquidation in the fourth quarter (figure 15). Automakers added to their dealers' stocks after cutbacks in production earlier in the year had reduced

15. Change in real business inventories, 2003–09



SOURCE: Department of Commerce, Bureau of Economic Analysis.

days' supply of domestic light vehicles to below their preferred levels. Outside of motor vehicles, firms continued to draw down inventories in the fourth quarter, but at a much slower pace than earlier in the year. Indeed, purchasing managers in the manufacturing sector report that their customers' inventories are relatively lean, a development that could lead to some restocking in the coming months.

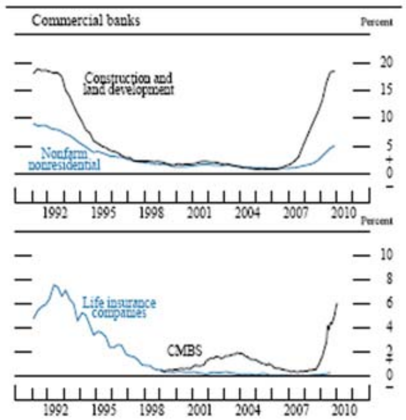
Corporate Profits and Business Finance

Overall, operating earnings per share for S&P 500 firms rebounded over the course of 2009. Still, earnings were well below the levels experienced prior to the financial market turmoil and the accompanying recession. Within the S&P 500, earnings for financial firms fluctuated around low levels, while earnings for nonfinancial firms rebounded sharply as the economic recovery began to take hold. Data from firms that have reported for the fourth quarter suggest that earnings for nonfinancial firms continued to recover.

The credit quality of nonfinancial corporations improved somewhat over the second part of last year, although signs of stress persisted. Business leverage, as measured by the ratio of debt to assets, fell in the third quarter. Credit rating downgrades outpaced upgrades early in 2009, but the pace of downgrades moderated substantially in the second half of the year, and by the fourth quarter upgrades were outpacing downgrades. In addition, the corporate bond default rate dropped into the range that had prevailed before the financial crisis began in August 2007.

Delinquency rates on loans to nonfinancial businesses, however, rose throughout the year. For commercial and industrial (C&I) loans, delinquencies in the fourth quarter reached 4.5 percent. In response to a special question on the January 2010 SLOOS, a large net fraction of banks reported that in the fourth quarter, the credit quality of their existing C&I loans to small firms was worse than the quality of their loans to larger firms. While survey respondents generally expected the credit quality of their C&I loan portfolios to improve during 2010, banks' outlook for C&I loans to larger firms was more optimistic than it was for such loans to smaller firms. Reflecting deterioration in commercial property markets, delinquency rates on commercial real estate (CRE) loans both in securitized pools and on banks' books moved up sharply in the second half of 2009 (figure 16). Delinquency rates on construction and land development loans climbed to especially high levels. In October 2009, the Federal Reserve joined with other banking regulators to provide guidelines to banks in their efforts to work constructively with troubled CRE borrowers.[9]

16. Delinquency rates on commercial real estate loans, 1991–2010



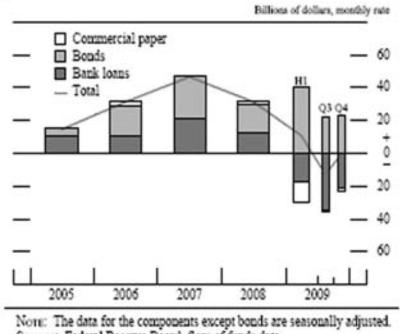
Note: The data for commercial banks and life insurance companies are quarterly and extend through 2009:Q4 and 2009:Q3, respectively. The data for commercial mortgage-backed securities (CMBS) are monthly and extend through January 2010. The delinquency rates for commercial banks and CMBS are the percent 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.

The debt of domestic nonfinancial businesses contracted slightly during the second half of 2009, and the composition of borrowing continued to shift toward longer-term debt (figure 17). Net issuance of corporate bonds remained strong as businesses took advantage of favorable market conditions to issue longer-term debt; at the same time, bank loans to businesses—both C&I and CRE loans—contracted, as did commercial paper.

9. This statement updated and replaced existing supervisory guidance to assist examiners in evaluating institutions' efforts to renew or restructure loans to creditworthy CRE borrowers. The statement was intended to promote supervisory consistency, enhance the transparency of CRE workout transactions (that is, transactions intended to renew and restructure the loans), and ensure that supervisory policies and actions do not inadvertently curtail the availability of credit to sound borrowers. For more information, see Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, National Credit Union Administration, Office of the Comptroller of the Currency, Office of Thrift Supervision, and Federal Financial Institutions Examination Council State Liaison Committee (2009), "Policy Statement on Prudent Commercial Real Estate Loan Workouts," attachment to Supervision and Regulation Letter SR 09-7 (October 30), www.federalreserve.gov/boarddocs/srletters/2009/sr0907a1.pdf.

17. Selected components of net financing for nonfinancial businesses, 2005–09



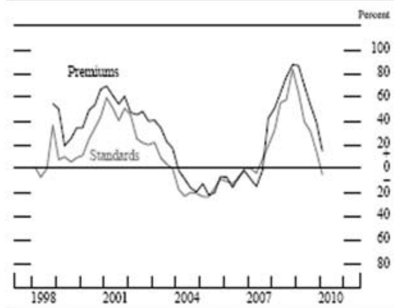
NOTE: The data for the components except bonds are seasonally adjusted.
SOURCE: Federal Reserve Board, flow of funds data.

The decline in bank lending to businesses was due partly to the weakness in loan demand. Many banks experiencing steep declines in C&I loans reported that existing loans were paid down across a wide swath of industries. Respondents to the January 2010 SLOOS indicated that weak demand for C&I loans during the second half of 2009 reflected their customers' reduced need to use these loans to finance investment in plant and equipment as well as to finance accounts receivable, inventories, and mergers and acquisitions. In addition, demand was reportedly low for CRE loans amid weak fundamentals in the sector.

The weakness in bank lending to businesses in 2009 was also a consequence of a tightening in lending standards. Responses to the SLOOS indicated that lending standards for C&I loans were tightened significantly in the summer and fall of 2009 and that they remained about unchanged in the final months of the year (figure 18). In addition, many banks continued to tighten some terms throughout the year—for example, by increasing the interest rate premiums charged on riskier loans. Considerable net fractions of banks also continued to report tightening lending standards on CRE loans.

Small businesses have been particularly affected by tight bank lending standards because of their lack of direct access to capital markets. In surveys conducted by the National Federation of Independent Business (NFIB), the net fraction of small businesses reporting that credit had become more difficult to obtain over the preceding three months remained at extremely elevated levels during the second half of 2009 (figure 19). Moreover, considerable net fractions of NFIB survey respondents expected lending conditions to tighten further in

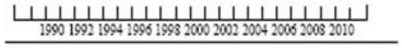
18. Net percentage of domestic banks tightening standards and increasing premiums charged on riskier loans to large and medium-sized borrowers, 1998–2010



NOTE: The data are drawn from a survey generally conducted four times per year; the last observation is from the January 2010 survey, which covers 2009:Q4. Net percentage is the percentage of banks reporting a tightening of standards or an increase in premiums less the percentage reporting an easing or a decrease. 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.

the near term. However, when asked about the most important problem they faced, small businesses most frequently cited poor sales, while only a small fraction cited credit availability. Recognizing that small businesses play a crucial role in the economy and that some are experiencing difficulty in obtaining or renewing credit, the federal financial regulatory agencies and the

19. Net percentage of small businesses that reported more difficulty in obtaining credit, 1989–2010



NOTE: The data are drawn from a survey conducted monthly and are seasonally adjusted; the last observation is from the January 2010 survey, which covers December 2009. The data reflect the proportion of borrowers who sought credit in the past three months that reported more difficulty in obtaining credit less the proportion that reported more ease in obtaining credit.
SOURCE: National Federation of Independent Business.

Conference of State Bank Supervisors issued a statement on February 5, 2010, regarding lending to these businesses.[10] The statement emphasized that financial institutions that engage in prudent small business lending will not be subject to supervisory criticism for small business loans made on that basis. Further, the statement emphasized that regulators are working with the industry and supervisory staff to ensure that supervisory policies and actions do not inadvertently curtail the availability of credit to financially sound small business borrowers.

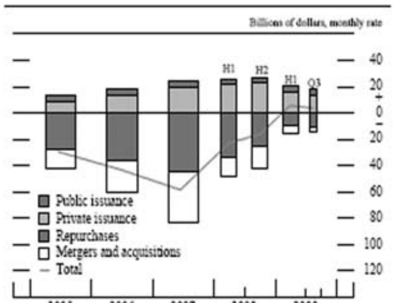
In the equity market, both seasoned and initial offerings by nonfinancial firms were solid in the second half of 2009 (figure 20). After nearly ceasing earlier in the year, cash-financed mergers picked up toward year-end, mostly as the result of a few large deals. Share repurchases continued to be light.

New issuance in the commercial mortgage-backed securities (CMBS) market—which had ceased in the third quarter of 2008, thus eliminating an important source of financing for many lenders—resumed in November 2009 with a securitization supported by the Federal Reserve's TALF program. A handful of subsequent small securitizations, with more-conservative underwriting and simpler structures than had prevailed during the credit boom, were brought to market and successfully completed without support from the TALF. Nevertheless, issuance of CMBS remains very light, and material increases in issuance appeared unlikely in the near term. Trading in existing CMBS picked up during the second half of 2009, and yield spreads relative to Treasury securities narrowed, although they remain very high by historical standards. Some of the improvement likely reflected support provided by the Federal Reserve through the part of the TALF program that provides loans for the purchase of "legacy" CMBS.

Issuance of leveraged loans, which often involves loan extensions by nonbank financial institutions, also remained weak throughout 2009 although market conditions reportedly improved. Prior to the crisis, this segment of the syndicated loan market provided considerable financing to lower-rated nonfinancial firms. However, issuance of leveraged loans fell to low levels when investors moved away from structured finance products such as collateralized loan obligations, which had been substantial purchasers of such credits. The market began to show signs of recovery last year with secondary-market prices of loans moving higher, and, by late in the year, new loans had found increased investor interest amid some easing in loan terms.

10. For more information, see Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, the Office of Thrift Supervision, National Credit Union Administration, and Conference of State Bank Supervisors (2010), "Interagency Statement on Meeting the Credit Needs of Creditworthy Small Business Borrowers," attachment to "Regulators Issue Statement on Lending to Creditworthy Small Businesses," joint press release, February 5, www.occ.treas.gov/ftp/release/2010-14.htm.

20. Components of net equity issuance, 2005–09



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.

The Government Sector

Federal Government

The deficit in the federal unified budget rose markedly in fiscal year 2009 and reached \$1.4 trillion, about \$1 trillion higher than in fiscal 2008. The effects of the weak economy on revenues and outlays, along with the budget costs associated with the fiscal stimulus legislation enacted last February (the American Recovery and Reinvestment Act (ARRA)), the Troubled Asset Relief Program, and the conservatorship of the mortgage-related GSEs, all contributed to the widening of the budget gap. The deficit is expected to remain sharply elevated in fiscal 2010. Although the budget costs of the financial stabilization programs are expected to be lower than in the last fiscal year, the spend-out from last year's fiscal stimulus package is expected to be higher, and tax revenues are anticipated to remain weak. The Congressional Budget Office projects that the deficit will be about \$1.3 trillion this fiscal year, just a touch below last year's deficit, and that federal debt held by the public will reach 60 percent of nominal GDP, the highest level recorded since the early 1950s.

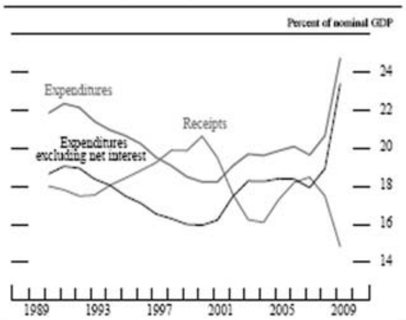
The steep drop in economic activity during 2008 and the first half of 2009 resulted in sharply lower tax receipts (figure 21). After falling about 2 percent in fiscal 2008, federal receipts plunged 18 percent in fiscal 2009, and tax receipts over the first four months of the current fiscal year have continued to decline relative to the comparable year-earlier period. The decline in revenues in fiscal 2009 was particularly steep for corporate taxes, mostly as a result of the sharp contraction in corporate profits in 2008.[11] Individual income and payroll taxes also declined substantially, reflecting the effects of the weak labor market on nominal wage and salary income, a decline in capital gains realizations, and the revenue-reducing provisions of the 2009 fiscal stimulus legislation.

While the outlays associated with the TARP and the conservatorship of the GSEs contributed importantly to the rapid rise in federal spending in fiscal 2009, outlays excluding these extraordinary costs rose a relatively steep 10 percent.[12] Spending for Medicaid and income support programs jumped almost 25 percent in fiscal 2009 as a result of the deterioration in the labor market as well as policy decisions to expand funding for a number of such programs. This category of spending has continued to rise rapidly thus far in fiscal 2010, and most other categories of spending have increased fairly briskly as well.

11. Because final payments on 2008 liabilities were not due until April of 2009 and because of the difference between fiscal and calendar years, much of the contraction in 2008 corporate profits did not show through to tax revenues until fiscal 2009.

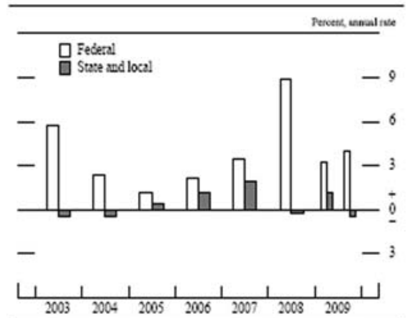
12. In the Monthly Treasury Statements, equity purchases and debt-related transactions under the TARP are recorded on a net present value basis, taking into account market risk, as are the Treasury's purchases of the GSE's MBS. However, equity purchases from the GSEs in conservatorship are recorded on a cash flow basis.

21. Federal receipts and expenditures, 1989–2009



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.

22. Change in real government expenditures on consumption and investment, 2003–09



Source: Department of Commerce, Bureau of Economic Analysis.

As measured in the national income and product accounts (NIPA), real federal expenditures on consumption and gross investment—the part of federal spending that is a direct component of GDP—rose at a 4 percent pace in the second half of 2009 (figure 22). Nondefense outlays increased rapidly, in part reflecting the boost in spending from the 2009 fiscal stimulus legislation, while real defense outlays rose modestly.

Federal Borrowing

Federal debt expanded rapidly throughout 2009 and rose to more than 50 percent of nominal GDP by the end of 2009, up from around 35 percent earlier in the decade. To fund the increased borrowing needs, Treasury auctions grew to record sizes. However, demand for Treasury issues kept pace, and bid-to-cover ratios at these auctions were generally strong. Foreign demand was solid, and foreign custody holdings of Treasury securities at the Federal Reserve Bank of New York increased considerably over the year.

State and Local Government

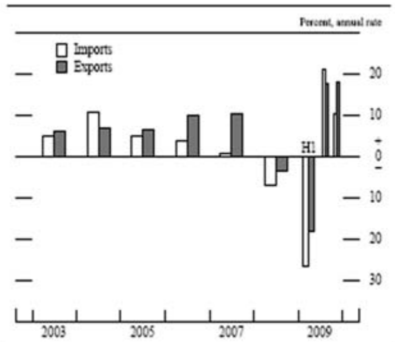
Despite the substantial federal aid provided by the ARRA, the fiscal situations of state and local governments remain challenging. At the state level, revenues from income, business, and sales taxes continued to fall in the second half of last year, and many states are currently in the process of addressing shortfalls in their fiscal 2010 budgets. At the local level, revenues have held up fairly well, as receipts from property taxes, on which these jurisdictions rely heavily, have continued to rise moderately, reflecting the typically slow response of property assessments to changes in home values. Nevertheless, the sharp fall in house prices over the past few years is likely to put some downward pressure on local revenues before long. Moreover, many state and local governments have experienced significant capital losses in their employee pension funds, and they will need to set aside resources in coming years to rebuild pension assets.

These budget pressures showed through to state and local spending. As measured in the NIPA, real consumption expenditures of state and local governments declined over the second half of 2009.[13] In particular, these jurisdictions began to reduce employment in mid-2009, and those cuts continued in January. In contrast, investment spending by state and local governments rose moderately during the second half of 2009. The rise in investment spending was supported by infrastructure grants provided by the federal government as part of the ARRA, as well as by a recovery of activity in municipal bond markets that increased the availability and lowered the cost of financing. Also, because capital budgets are typically not encompassed within balanced budget requirements, states were under less pressure to restrain their investment spending.

State and Local Government Borrowing

Borrowing by state and local governments picked up a bit in the second half of the year from its already solid pace in the first half. Gross issuance of long-term bonds, primarily to finance new capital projects, was strong. Issuance was supported by the Build America Bonds program, which was authorized under the ARRA.[14] Short-term issuance was more moderate and generally consistent with typical seasonal patterns. Market participants reported that the market for variable-rate demand obligations, which became severely strained during the financial crisis, had largely recovered.[15]

23. Change in real imports and exports of goods and services, 2003–09



Source: Department of Commerce, Bureau of Economic Analysis.

Interest rates on long-term municipal bonds declined during the year, but the ratio of their yields to those on comparable-maturity Treasury securities remained somewhat elevated by historical standards. Credit ratings of state and local governments deteriorated over 2009 as a consequence of budgetary problems faced by many of these governments.

The External Sector

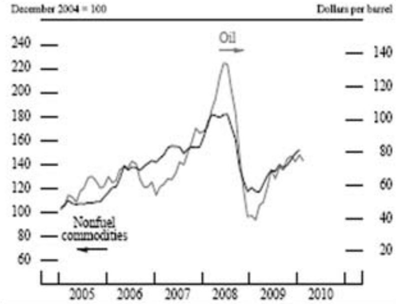
Both exports and imports rebounded in the second half of 2009 from precipitous falls earlier in the year (figure 23). As foreign economic activity began to improve, real exports rose at an annual rate of nearly 20 percent in the second half of the year. Real imports increased at about the same pace, supported by the recovery under way in U.S. demand. The pickup in trade flows was widespread across major types of products and U.S. trading partners but was particularly pronounced for both exports and imports of capital goods. Exports and imports of automotive products also picked up sharply in the second half of last year, reflecting the rise in motor vehicle production in North America, which depends importantly on flows of parts and finished vehicles between the United States, Canada, and Mexico. Despite the bounceback, trade flows only par-

13. Consumption expenditures by state and local governments include all outlays other than those associated with investment projects.

14. The Build America Bonds program allows state and local governments to issue taxable bonds for capital projects and receive a subsidy payment from the Treasury for 35 percent of interest costs.

15. Variable-rate demand obligations (VRDOs) are taxable or tax-exempt bonds that combine long maturities with floating short-term interest rates that are reset on a weekly, monthly, or other periodic basis. VRDOs also have a contractual liquidity backstop, typically provided by a commercial or investment bank, that ensures that bondholders are able to redeem their investment at par plus accrued interest even if the securities cannot be successfully remarketed to other investors.

24. Prices of oil and nonfuel commodities, 2005–10



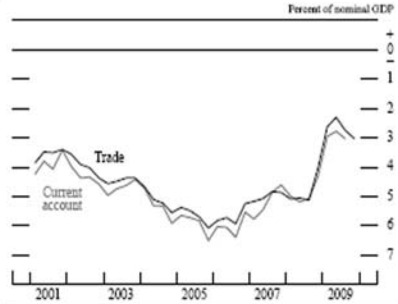
NOTE: The data are monthly. The oil price is the spot price of West Texas Intermediate crude oil, and the last observation is the average for February 1–17, 2010. The price of nonfuel commodities is an index of 45 primary-commodity prices and extends through January 2010.
SOURCE: For oil, the Commodity Research Bureau; for nonfuel commodities, International Monetary Fund.

tially retraced the unusually steep declines registered in late 2008 and early 2009. This pattern was also true for global trade flows, as discussed in the box "Developments in Global Trade." The strength of the recovery in global trade so far, however, differs substantially across countries and regions.

Oil and nonfuel commodity prices increased substantially over the year (figure 24). After plunging from a daily high of about $145 per barrel in mid-2008 to a low of less than $40 per barrel early in 2009, the spot price of West Texas Intermediate crude oil rose rapidly to reach about $70 per barrel by the middle of 2009. The price of oil rose further over the second half of the year to reach about $80 per barrel in November and has fluctuated between $70 and $80 per barrel through mid-February 2010. The increase in the price of oil over the course of 2009 was driven in large measure by strengthening global activity, particularly in the emerging market economies. The ongoing effects of earlier restrictions in OPEC supply were another likely contributing factor. The prices of longer-term futures contracts (that is, those expiring in December 2018) for crude oil also moved up and, as of mid-February, were about $96 per barrel. The upward-sloping futures curve is consistent with a view by market participants that oil prices will continue to rise as global demand strengthens over the medium term.

Broad indexes of nonfuel commodity prices also rose from lows near the start of 2009. As with the rise in oil prices, a key driver of the increase in commodity prices has been resurgent demand from emerging market economies, especially China. Market participants expect some further increases in commodity prices as

25. U.S. trade and current account balances, 2001–09



NOTE: The data are quarterly. For the trade account, the data extend through 2009:Q4; for the current account, they extend through 2009:Q3.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

the economic recovery gains strength, albeit increases that are less pronounced than those recorded during last year's rebound.

The steep decline in commodity prices in late 2008 put considerable downward pressure on U.S. import prices for the first half of 2009. Overall for 2009, prices of imported goods fell 1 percent while prices for goods excluding oil fell 2½ percent. Recent upward moves in commodity prices suggest that some of this downward pressure on import prices will be reversed in 2010.

The U.S. trade deficit narrowed considerably in the first half of 2009. Nominal imports fell more than nominal exports early in the year, partly reflecting a substantial decline in the value of oil imports. The trade deficit widened moderately over the remainder of the year, however, as both imports and exports picked up in subsequent quarters and oil prices moved higher. In the fourth quarter of 2009, the trade deficit was $440 billion (annual rate), or about 3 percent of nominal GDP, compared with a deficit of 4 percent of nominal GDP a year earlier (figure 25).

National Saving

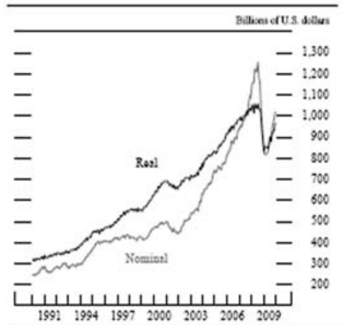
Total U.S. net national saving—that is, the saving of households, businesses, and governments, excluding depreciation charges—remained extremely low by historical standards in 2009, averaging about negative 2½ percent of nominal GDP over the first three quarters of the year (figure 26). After having reached nearly 4 percent of nominal GDP in early 2006, net national saving dropped over the subsequent three years as the federal budget deficit widened substantially and the

Developments in Global Trade

The downturn in global activity was accompanied by a dramatic collapse in global trade. Measured in U.S. dollars, global exports fell about 35 percent between July 2008 and February 2009.[1] About one-third of the decline was a result of falling prices, notably for oil and other commodities. The volume of global exports is estimated to have contracted about 20 percent between mid-2008 and early 2009, a larger and more abrupt decline than has been observed in previous cycles (figure A).

The fall in global exports was also more widespread across countries and regions than has typically been the case in past recessions. The severity of the decline in trade was a major factor in the spread of the economic downturn to the emerging market economies in Asia and Latin America, which were generally less directly exposed to the financial crisis than were the advanced economies. Early on, financial and economic indicators in the emerging market economies appeared to be relatively resilient, raising the possibility that those economies had "decoupled" from developments in the advanced economies. However, the trade channel proved quite potent, and most of the emerging market economies experienced deep recessions. A major exception was China, which provided considerable fiscal stimulus to its own economy.

A. Real and nominal global exports, 1990–2009



NOTE: The data are monthly and extend through December 2009. Real global exports are staff estimates expressed in billions of 2007 U.S. dollars.

SOURCE: The nominal data are the sum of U.S. dollar exports from individual country sources via databases maintained by Haver Analytics, CEIC, and the IMF Direction of Trade Statistics, in some cases seasonally adjusted by Federal Reserve staff. Forty-four countries are included. The real data are calculated using trade prices from country sources via Haver Analytics (in some cases interpolated from quarterly or annual data), which are converted to U.S. dollar prices using each country's dollar exchange rate and rebased to 2007.

The primary explanation for the deep and abrupt collapse in global trade seems to be that the contraction in global demand was much more severe than in the past. Constraints on the supply of trade finance related to the general credit crunch may have played a role at the beginning, but the fall in demand soon became the more important factor. The sensitivity of trade to the decline in gross domestic product also appears to have been stronger in this cycle than in past cycles, although there is no real agreement on why this might be the case. Greater integration of production across coun-

1. The total includes 44 countries. The emerging Asian economies consist of China, Hong Kong, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan, Thailand, and Vietnam; the Latin American economies consist of Argentina, Brazil, Chile, Colombia, Mexico, and Venezuela; the other emerging market economies consist of Hungary, Israel, Poland, Russia, South Africa, and Turkey; and the advanced economies consist of Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

fiscal positions of state and local governments deteriorated. In contrast, private saving rose considerably, on balance, over this period. National saving will likely remain relatively low this year in light of the continuing high federal budget deficit. If not raised over the longer run, persistent low levels of national saving will likely be associated with both low rates of capital formation and heavy borrowing from abroad, limiting the rise in the standard of living of U.S. residents over time.

The Labor Market

Employment and Unemployment

After falling sharply in the first half of 2009, employment continued to contract through the remainder of the year, but at a gradually moderating pace. Nonfarm private payroll employment fell 725,000 jobs per month, on average, from January to April of 2009; the pace of tries and an increase in exports of products for which there are shorter lags between changes in demand and changes in exports—such as electronics—may also have added to the speed and synchronicity of the collapse.

Exports appear to have stopped declining in most economies in the first half of 2009, but so far the strength of the recovery in trade has differed across countries. In particular, exports of the emerging Asian economies are much closer to their previous peaks than are exports of the advanced economies (figures B and C), as the strength of the Chinese economy has so far been a key factor driving exports of the other emerging Asian economies.

B. Real export indexes for advanced economies, 2000–09

Note: The data are monthly and extend through December 2009. In this figure, the European economies are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Source: The nominal data are U.S. dollar exports from individual country sources via databases maintained by Haver Analytics and the IMF Direction of Trade Statistics, in some cases seasonally adjusted by Federal Reserve staff. The real data are calculated using trade prices from country sources via Haver Analytics (in some cases interpolated from quarterly or annual data), which are converted to U.S. dollar prices using each country's dollar exchange rate and rebased to 2007.

C. Real export indexes for emerging market economies, 2000–09

Note: The data are monthly and extend through December 2009. In this figure, the emerging Asian economies are China, Hong Kong, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan, Thailand, and Vietnam; the Latin American economies are Argentina, Brazil, Chile, Colombia, Mexico, and Venezuela; and the other economies are Hungary, Israel, Poland, Russia, South Africa, and Turkey.

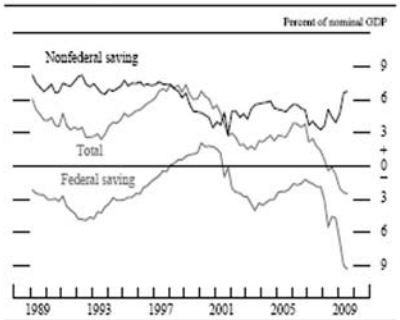
Source: The nominal data are U.S. dollar exports from individual country sources via databases maintained by Haver Analytics, CEIC, and the IMF Direction of Trade Statistics, in some cases seasonally adjusted by Federal Reserve staff. The real data are calculated using trade prices from country sources via Haver Analytics (in some cases interpolated from quarterly or annual data), which are converted to U.S. dollar prices using each country's dollar exchange rate and rebased to 2007.

job loss slowed to about 300,000 per month from May to October, and to an average of 20,000 jobs per month from November to January (figure 27). The moderation in the pace of job losses was relatively widespread across sectors, although cutbacks in employment in the construction industry continued to be sizable through January.

After rising rapidly for more than a year, the unemployment rate stabilized at 10 percent in the fourth quarter of 2009 (figure 28). In January, the jobless rate dropped to 9.7 percent, though it remained 4.7 percentage points higher than its level two years ago.

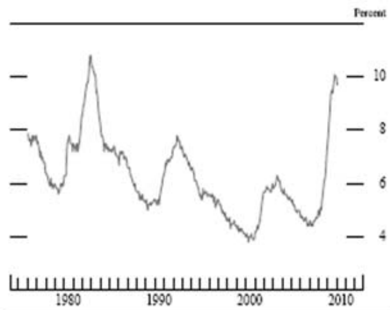
The slowing in net job losses since mid-2009 primarily reflected a reduction in layoffs rather than an improvement in hiring. Both the number of new job losses and initial claims for unemployment insurance are down significantly from their highs in the spring of 2009, while most indicators of hiring conditions, such

26. Net saving, 1989–2009



NOTE: The data are quarterly and extend through 2009:Q3. Nonfederal saving is the sum of personal and net business saving and the net saving of state and local governments. GDP is gross domestic product.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

28. Civilian unemployment rate, 1976–2010



NOTE: The data are monthly and extend through January 2010.
SOURCE: Department of Labor, Bureau of Labor Statistics.

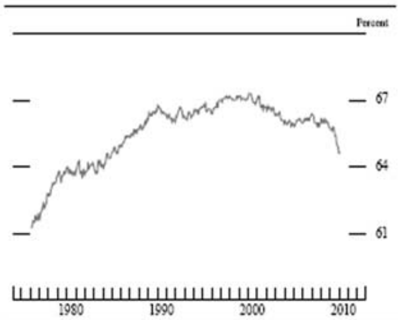
as the Bureau of Labor Statistics survey of job openings, remain weak. The average duration of an ongoing spell of unemployment continued to lengthen markedly in the second half of 2009, and joblessness became increasingly concentrated among the long-term unemployed. In January, 6.3 million individuals—more than 40 percent of the unemployed—had been out of work for at least six months. Furthermore, the labor force participation rate has declined steeply since last spring, a development likely related, at least in part, to the reactions of potential workers to the scarcity of employment opportunities (figure 29).

However, in recent months, labor market reports have included some encouraging signs that labor demand may be firming. For example, employment in the temporary help industry, which frequently is one of the first to see an improvement in hiring, has been increasing since October. In addition, after steep declines in 2008 and the first quarter of 2009, the average workweek of production and nonsupervisory employees stabilized at roughly 33.1 hours per week through the remainder of the year, before ticking up to 33.2 hours in November and December and 33.3 hours in January. Another indicator of an improvement in work hours, the fraction of workers on part-time schedules for economic reasons, increased only slightly, on net, in the second half of the year after a sharp rise in the first half and then turned down noticeably in January.

27. Net change in private payroll employment, 2003–10

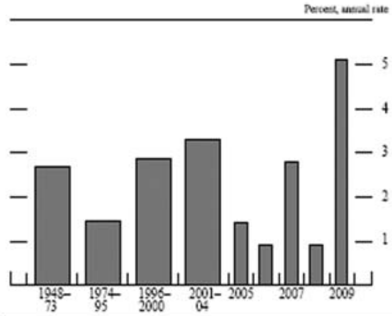
NOTE: The data are monthly and extend through January 2010.
SOURCE: Department of Labor, Bureau of Labor Statistics.

29. Labor force participation rate, 1976–2010



NOTE: The data are monthly and extend through January 2010.
SOURCE: Department of Labor, Bureau of Labor Statistics.

30. Change in output per hour, 1948–2009



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.

Productivity and Labor Compensation

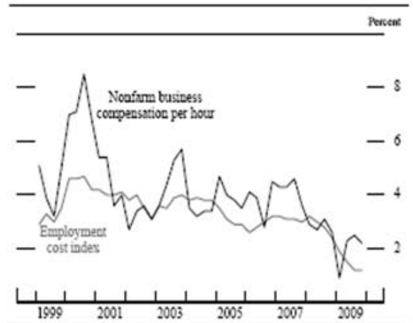
Labor productivity surged in 2009, reflecting, at least to some extent, the reluctance of firms to increase hiring even as demand expanded. According to the latest available published data, output per hour in the nonfarm business sector increased at an annual rate of 6¾ percent in the second half of 2009, after rising 3½ percent in the first half, and about 1 percent in 2008 (figure 30).

Despite large gains in productivity, increases in hourly worker compensation have remained subdued. The employment cost index for private industry workers, which measures both wages and the cost to employers of providing benefits, rose only 1¼ percent in nominal terms in 2009 after rising almost 2½ percent in 2008. Compensation per hour in the nonfarm business sector—a measure derived from the worker compensation data in the NIPA—showed less deceleration, rising 2.2 percent in nominal terms in 2009, only slightly slower than the 2.6 percent rise recorded for 2008 (figure 31). Real hourly compensation—that is, adjusted for the rise in consumer prices—increased only modestly. Reflecting the subdued increase in nominal hourly compensation, along with the outsized gain in labor productivity noted earlier, unit labor costs in the nonfarm business sector declined 2¾ percent in 2009.

Prices

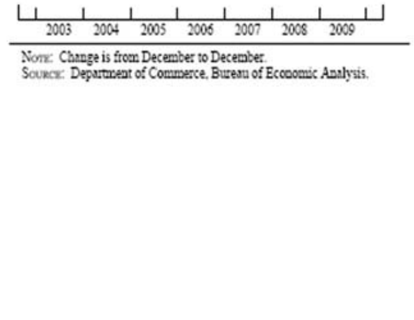
Headline consumer price inflation picked up in 2009, as sharp increases in energy prices offset reductions in food prices and a deceleration in other prices. After rising ½ percent over the 12 months of 2008, overall prices for personal consumption expenditures rose about 2 percent in 2009. In contrast, the core PCE price index—which excludes the prices of energy items as well as those of food and beverages—increased a little less than 1½ percent in 2009, compared with a rise of roughly 1¾ percent in 2008 (figure 32). Data for PCE prices in January 2010 are not yet available, but information from the consumer price index and other sources suggests that inflation remained subdued.

31. Measures of change in hourly compensation, 1999–2009



NOTE: The data are quarterly and extend through 2009:Q4. For nonfarm business compensation, change is over four quarters; for the employment cost index (ECI), change is over the 12 months ending in the last month of each quarter. The nonfarm business sector excludes farms, government, nonprofit institutions, and households. The sector covered by the ECI used here is the nonfarm business sector plus nonprofit institutions. A new ECI series was introduced for data as of 2001, but the new series is continuous with the old.
SOURCE: Department of Labor, Bureau of Labor Statistics.

32. Change in the chain-type price index for personal consumption expenditures, 2003–09



NOTE: Change is from December to December.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Consumer energy prices rose sharply in 2009, reversing much of the steep decline recorded in 2008. The retail price of gasoline was up more than 60 percent for the year as a whole, driven higher by a resurgence in the cost of crude oil. Reflecting the burgeoning supplies from new domestic wells, consumer natural gas prices fell sharply over the first half of 2009, before increasing again in the last few months of the year as the economic outlook improved. Electricity prices also fell during the early part of 2009 before retracing part of that decline later in the year. Overall, natural gas prices were down almost 20 percent in 2009, while electricity prices were about unchanged.

After posting sizable declines throughout much of 2009, food prices turned up modestly in the fourth quarter of last year. For the year as a whole, consumer food prices fell 1½ percent after rising 6¾ percent in 2008; these changes largely reflected the pass-through to retail of huge swings in spot prices of crops and livestock over the past two years.

Excluding food and energy, PCE price inflation slowed last year. Core PCE prices rose at an annual rate of 1¾ percent in the first half of 2009, similar to the pace in 2008, and then increased at an annual rate of only a little above 1 percent over the final six months of the year. This slowdown in core inflation was centered in a noticeable deceleration in the prices of non-energy services. For those prices, firms' widespread cost-cutting efforts over the past year and the continued weakness in the housing market that has put downward pressure on housing costs have likely been important factors. The prices of many core consumer goods continued to rise only moderately in 2009; a notable exception was tobacco, for which tax-induced price hikes were substantial.

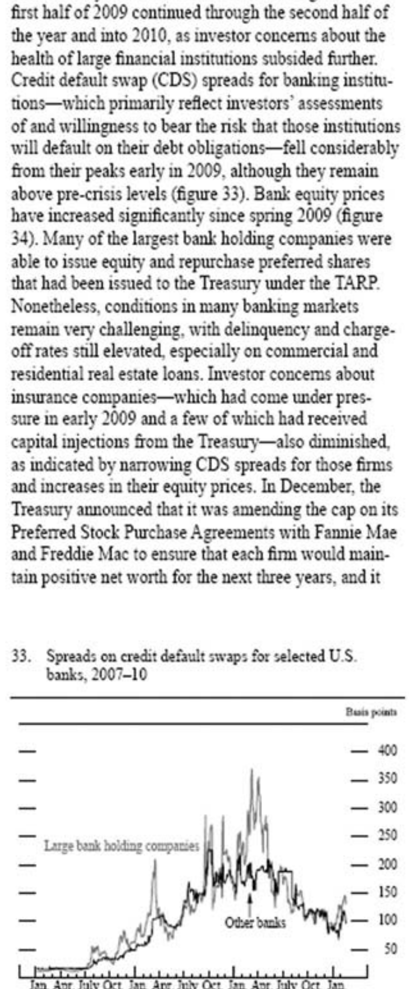
Survey-based measures of near-term inflation expectations, which were unusually low in the beginning of 2009, moved up, on average, over the remainder of the year. According to the Thomson Reuters/University of Michigan Surveys of Consumers, median expectations for year-ahead inflation stood at 2.8 percent in January, up from about 2 percent at the beginning of 2009. Historically, this short-term measure has been influenced fairly heavily by contemporaneous movements in energy prices. Longer-term inflation expectations, by contrast, have been relatively stable over the past year. For example, the Thomson Reuters/University of Michigan survey measure of median 5- to 10-year inflation expectations was 2.9 percent in January of this year, similar to the readings during most of 2009, and near the lower end of the narrow range that has prevailed over the past few years.

Financial Stability Developments

Evolution of the Financial Sector, Policy Actions, and Market Developments

The recovery in the financial sector that began in the first half of 2009 continued through the second half of the year and into 2010, as investor concerns about the health of large financial institutions subsided further. Credit default swap (CDS) spreads for banking institutions—which primarily reflect investors' assessments of and willingness to bear the risk that those institutions will default on their debt obligations—fell considerably from their peaks early in 2009, although they remain above pre-crisis levels (figure 33). Bank equity prices have increased significantly since spring 2009 (figure 34). Many of the largest bank holding companies were able to issue equity and repurchase preferred shares that had been issued to the Treasury under the TARP. Nonetheless, conditions in many banking markets remain very challenging, with delinquency and charge-off rates still elevated, especially on commercial and residential real estate loans. Investor concerns about insurance companies—which had come under pressure in early 2009 and a few of which had received capital injections from the Treasury—also diminished, as indicated by narrowing CDS spreads for those firms and increases in their equity prices. In December, the Treasury announced that it was amending the cap on its Preferred Stock Purchase Agreements with Fannie Mae and Freddie Mac to ensure that each firm would maintain positive net worth for the next three years, and it

33. Spreads on credit default swaps for selected U.S. banks, 2007–10

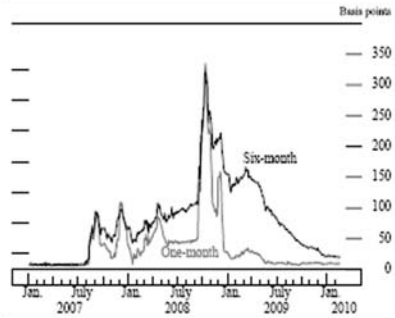


Note: The data are daily and extend through February 18, 2010. Median spreads for six bank holding companies and nine other banks.
Source: Markit.

34. Equity price indexes for banks and insurance companies, 2007–10

NOTE: The data are daily and extend through February 18, 2010.
SOURCE: Standard & Poor's.

35. Libor minus overnight index swap rate, 2007–10



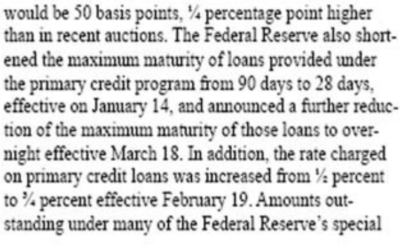
NOTE: The data are daily and extend through February 19, 2010. An overnight index swap (OIS) is an interest rate swap with the floating rate tied to an index of daily overnight rates, such as the effective federal funds rate. At maturity, two parties exchange, on the basis of the agreed notional amount, 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.

also announced that it was providing additional capital to GMAC under the TARP.

Consistent with diminishing concerns about the conditions of banking institutions, functioning in bank funding markets has improved steadily since the spring of last year. A measure of stress in these markets—the spread between the London interbank offered rate (Libor) and the rate on comparable-maturity overnight index swaps (OIS)—narrowed at all maturities; spreads at shorter maturities reached pre-crisis levels, while those at longer maturities remained somewhat elevated by historical standards (figure 35). Liquidity in term bank funding markets also improved at terms up to six months. Conditions improved in other money markets as well. Bid-asked spreads and haircuts applied to collateral in repurchase agreement (repo) markets retraced some of the run-ups that had occurred during the financial market turmoil, though haircuts on most types of collateral continued to be sizable relative to pre-crisis levels. In the commercial paper market, spreads between rates on lower-quality A2/P2 paper and on asset-backed commercial paper over higher-quality AA nonfinancial paper fell to the low end of the range observed since the fall of 2007 (figure 36).

With improved conditions in financial markets, the Federal Reserve and other agencies removed some of the extraordinary support that had been provided during the crisis. Starting in the second half of 2009, the Federal Reserve began to normalize its lending to commercial banks. The amounts and maturity of credit auctioned through the Term Auction Facility (TAF) were reduced over time, and early in 2010 the Federal Reserve announced that the final TAF auction would be conducted in March 2010. Later, the Federal Reserve noted that the minimum bid rate for the final auction would be 50 basis points, ¼ percentage point higher than in recent auctions. The Federal Reserve also shortened the maximum maturity of loans provided under the primary credit program from 90 days to 28 days, effective on January 14, and announced a further reduction of the maximum maturity of those loans to overnight effective March 18. In addition, the rate charged on primary credit loans was increased from ½ percent to ¾ percent effective February 19. Amounts outstanding under many of the Federal Reserve's special

36. Commercial paper spreads, 2007–10

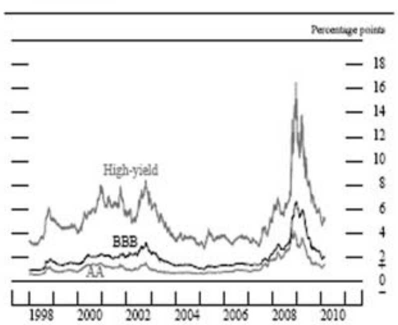


NOTE: The data are weekly and extend through February 17, 2010. Commercial paper yield spreads are for an overnight maturity and are expressed relative to the AA nonfinancial rate.
SOURCE: Depository Trust and Clearing Corporation.

liquidity facilities had dwindled to zero (or near zero) over the second half of 2009 as functioning of funding markets, both in the United States and abroad, continued to normalize. The Primary Dealer Credit Facility, the Term Securities Lending Facility, the Commercial Paper Funding Facility, the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, and the temporary liquidity swap lines with foreign central banks were all allowed to expire on February 1, 2010. Other government agencies also reduced their support to financial institutions. For instance, to buttress the liquidity of financial institutions, the FDIC had established in October 2008 a program to provide, in exchange for a fee, a guarantee on short- and medium-term debt issued by banking institutions. Financial institutions issued about $300 billion under this program, but use of the program declined after the summer of 2009 as financial institutions were able to successfully issue nonguaranteed debt. In light of these developments, the FDIC announced in late October 2009 that the guarantee program would be extended but with significant restrictions; no debt has been issued under the extended program.

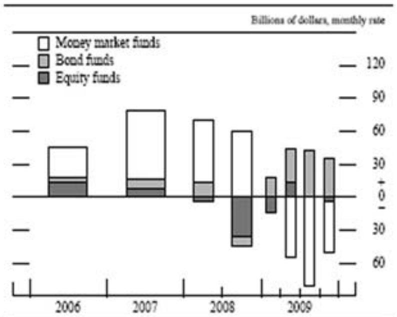
Asset prices in longer-term capital markets have also staged a noticeable recovery since the spring of 2009, and risk premiums have narrowed noticeably as investors' appetite for risk appears to be recovering. In the corporate bond market, risk spreads on both investment- and speculative-grade bonds—the difference between the yields on these securities and those on comparable-

37. Spreads of corporate bond yields over comparable off-the-run Treasury yields, by securities rating, 1998–2010



Note: The data are daily and extend through February 18, 2010. 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.

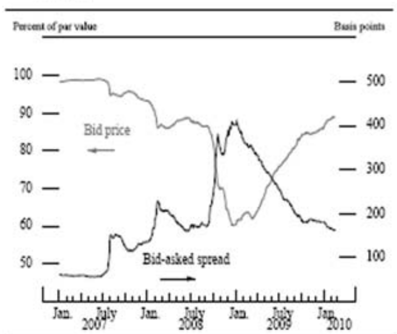
38. Net flows into mutual funds, 2006–09



Note: The data exclude reinvested dividends and are not seasonally adjusted.
Source: Federal Reserve Board, flow of funds data.

maturity Treasury securities—dropped, and by the end of last year those spreads were within ranges observed during the recoveries from previous recessions (figure 37). During the second half of 2009, the decline in risk spreads was accompanied by considerable inflows into mutual funds that invest in corporate bonds (figure 38). In the leveraged loan market, the average bid price climbed back toward par, and bid-asked spreads narrowed noticeably as trading conditions reportedly improved (figure 39). Equity markets rebounded significantly over the past few quarters, leaving broad equity market indexes about 65 percent above the low point reached in March 2009 (figure 40).

39. Secondary-market pricing for syndicated loans, 2007–10



Note: The data are daily and extend through February 18, 2010.
Source: LSTA/Thomson Reuters Mark-to-Market Pricing.

40. Stock price index, 1998–2010

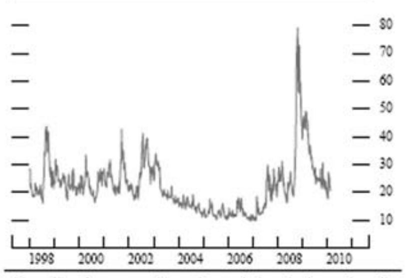
January 3, 2005 = 100

NOTE: The data are daily and extend through February 18, 2010.
SOURCE: Dow Jones Indexes.

Overall, the rebound in asset prices likely reflected corporate earnings that were generally above market expectations, improved measures of corporate credit quality, and brighter economic prospects. Apparently, investors also became somewhat less concerned about the downside risks to the economic outlook, as suggested by declines in measures of uncertainty and risk premiums. Implied volatility on the S&P 500, as calculated from option prices, held at moderate levels during the second half of 2009 and was well off the peak reached in November 2008 (figure 41). Moreover, a measure of the premium that investors require for holding equity shares—the difference between the ratio of 12-month forward expected earnings to equity prices for S&P 500 firms and the long-term real Treasury yield—narrowed in 2009, though it remains elevated by historical standards.

41. Implied S&P 500 volatility, 1998–2010

Percent



NOTE: The data are weekly and extend through the week ending February 19, 2010. The final observation is an estimate based on data through February 18, 2010. 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.

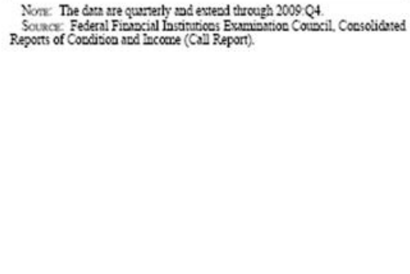
Banking Institutions

The profitability of the commercial banking sector, as measured by the return on equity, continued to be quite low during the second half of 2009 (figure 42). Elevated loan loss provisioning continued to be the largest factor restraining earnings; however, provisioning decreased significantly in the second half of the year, suggesting that banks believe that credit losses may be stabilizing. While some banks saw earnings boosted earlier last year by gains in trading and investment banking activities, revenue from these sources is reported to have dropped back in the fourth quarter. Although delinquency and charge-off rates for residential mortgages and commercial real estate loans continued to climb in the second half of 2009, for most other types of loans these metrics declined or showed signs of leveling out.

During the year, bank holding companies issued substantial amounts of common equity. Significant issuance occurred in the wake of the release of the Supervisory Capital Assessment Program (SCAP) results, which indicated that some firms needed to augment or improve the quality of their capital in order to assure that, even under a macroeconomic scenario that was more adverse than expected, they would emerge from the subsequent two-year period still capable of meeting the needs of creditworthy borrowers. The 19 SCAP firms issued about $110 billion in new common equity; combined with conversions of preferred stock, asset

42. Commercial bank profitability, 1988–2009

Percent, annual rate | Percent, annual rate



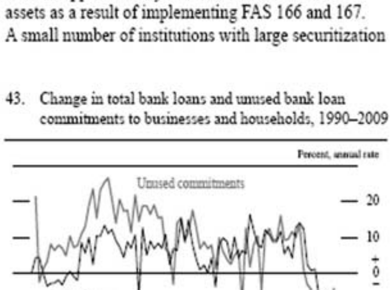
NOTE: The data are quarterly and extend through 2009:Q4.
SOURCE: Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report).

sales, and other capital actions, these steps have added more than $200 billion to common equity since the beginning of 2009. Equity offerings were also undertaken by other financial firms, and some used the proceeds to repay funds received as part of the Capital Purchase Program.

Against a backdrop of weak loan demand and tight credit policies throughout 2009, total loans on banks' books contracted even more sharply in the last two quarters taken together than in the first half of the year (figure 43). Outstanding unused loan commitments to both businesses and households also declined, albeit at a slower pace than in early 2009. The decline in loans was partially offset by an increase in holdings of securities, particularly Treasury securities and agency MBS, and a further rise in balances at the Federal Reserve. On balance, total industry assets declined. The decline in assets combined with an increase in capital to push regulatory capital ratios considerably higher.

The Financial Accounting Standards Board published Statements of Financial Accounting Standards Nos. 166 and 167 (FAS 166 and 167) in June 2009. The new standards modified the basis for determining whether a firm must consolidate securitized assets (as well as the associated liabilities and equity) onto its balance sheet; most banking organizations must implement the standards in the first quarter of 2010. Industry analysts estimate that banking organizations will consolidate approximately $600 billion of additional assets as a result of implementing FAS 166 and 167. A small number of institutions with large securitization programs will be most affected. While the regulatory capital ratios of the affected banking organizations may decrease after implementation of FAS 166 and 167, the ratios of organizations most affected by the accounting change are expected to remain substantially in excess of regulatory minimums. The federal banking agencies recently published a related risk-based capital rule that includes an optional one-year phase-in of certain risk-based capital impacts resulting from implementation of FAS 166 and 167.[16]

43. Change in total bank loans and unused bank loan commitments to businesses and households, 1990–2009



Note: The data, which are not seasonally adjusted, are quarterly and extend through 2009:Q4. Total loans are adjusted to remove the effects of large thrifts converting to commercial banks or merging with a commercial bank.

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

Monetary Policy Expectations and Treasury Rates

In July 2009, market participants had expected the target federal funds rate to be close to the current target range of 0 to ¼ percent in early 2010, but they had also anticipated that the removal of policy accommodation would be imminent. Over the second half of 2009, however, investors marked down their expectations for the path of the federal funds rate. Quotes on futures contracts imply that, as of mid-February 2010, market participants anticipate that policy will be tightened beginning in the third quarter of 2010, and that the tightening will proceed at a pace slower than was expected last summer. However, uncertainty about the size of term premiums and potential distortions created by the zero lower bound for the federal funds rate continue to make it difficult to obtain a definitive reading on the policy expectations of market participants from futures prices. The downward revision in policy expectations since July likely has reflected incoming economic data pointing to a somewhat weaker trajectory for employment and a lower path for inflation than had been anticipated. Another contributing factor likely was Federal Reserve communications, including the reiteration in the statement released after each meeting of the Federal Open Market Committee that economic conditions are likely

16. For more information and the text of the final rule, see Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of Thrift Supervision (2010), "Agencies Issue Final Rule for Regulatory Capital Standards Related to Statements of Financial Accounting Standards Nos. 166 and 167," press release, January 21, www.federalreserve.gov/newsevents/press/bcreg/20100121a.htm. The final rule was also published in the *Federal Register*; see Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of Thrift Supervision (2010), "Risk-Based Capital Guidelines; Capital Adequacy Guidelines; Capital Maintenance: Regulatory Capital; Impact of Modifications to Generally Accepted Accounting Principles; Consolidation of Asset-Backed Commercial Paper Programs; and Other Related Issues," final rule, *Federal Register*, vol. 75 (January 28), pp. 4636–54.

44. Interest rates on selected Treasury securities, 2004–10

NOTE: The data are daily and extend through February 18, 2010.
SOURCE: Department of the Treasury.

to warrant exceptionally low levels of the federal funds rate for an extended period.

Yields on shorter-maturity Treasury securities have edged lower since last summer, consistent with the downward shift in the expected policy path (figure 44). However, yields on longer-maturity nominal Treasury securities have increased slightly, on net, likely in response to generally positive news about the economy and declines in the weight investors had placed on extremely adverse economic outcomes. The gradual tapering and the completion of the Federal Reserve's large-scale asset purchases of Treasury securities in October 2009 appeared to put little upward pressure on Treasury yields.

Yields on Treasury inflation-protected securities (TIPS) declined somewhat in the second half of 2009 and into 2010. The result was an increase in inflation compensation—the difference between comparable-maturity nominal yields and TIPS yields. The increase was concentrated at shorter-maturities and was partly a response to rising prices of oil and other commodities. Inflation compensation at more distant horizons was somewhat volatile and was little changed on net. Inferences about investors' inflation expectations have been more difficult to make since the second half of 2008 because special factors, such as safe-haven demands and an increased preference of investors for liquid assets, appear to have significantly affected the relative demand for nominal and inflation-indexed securities. These special factors began to abate in the first half of 2009 and receded further in the second half of the year, and the resulting changes in nominal and inflation-adjusted yields may have accounted for part of the recent increase in inflation compensation. On net, survey measures of longer-run inflation expectations have remained stable.

Monetary Aggregates and the Federal Reserve's Balance Sheet

After a brisk increase in the first half of the year, the M2 monetary aggregate expanded slowly in the second half of 2009 and in early 2010 (annual growth rate shown in figure 45).[17] The rise in the latter part of the year was driven largely by increases in liquid deposits, as interest rates on savings deposits were reduced more slowly than rates on other types of deposits, and households and firms maintained some preference for safe and liquid assets. Outflows from small time deposits and retail money market mutual funds intensified during the second half of 2009, likely because of ongoing declines in the interest rates offered on these products. The currency component of the money stock expanded

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

45. M2 growth rate, 1991–2009

NOTE: The data extend through 2009 and are annual on a fourth-quarter over fourth-quarter basis. For definition of M2, see text note 17.
SOURCE: Federal Reserve Board, Statistical Release H.6, "Money Stock Measures."

modestly in the second half of the year. The monetary base—essentially the sum of currency in circulation and the reserve balances of depository institutions held at the Federal Reserve—expanded rapidly for much of the second half of 2009, as the increase in reserve balances resulting from the large-scale asset purchases more than offset the decline caused by reduced usage of the Federal Reserve's credit programs. However, the monetary base increased more slowly toward the end of 2009 and early 2010 as these purchases were tapered and as use of Federal Reserve liquidity facilities declined.

1. Selected components of the Federal Reserve balance sheet, 2008–10

Millions of dollars

Balance sheet item	Dec. 31, 2008	July 15, 2009	Feb. 17, 2010
Total assets	**2,240,946**	**2,074,822**	**2,280,952**
Selected assets			
Credit extended to depository institutions and dealers			
Primary credit	93,769	34,743	14,156
Term auction credit	450,219	273,691	15,426
Central bank liquidity swaps	553,728	111,641	0
Primary Dealer Credit Facility and other broker-dealer credit	37,404	0	0
Credit extended to other market participants			
Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility	23,765	5,469	0
Net portfolio holdings of Commercial Paper Funding Facility LLC	334,102	111,053	7,721
Net portfolio holdings of LLCs funded through the Money Market Investor Funding Facility	0	0	0
Term Asset-Backed Securities Loan Facility	...	30,121	47,182
Support of critical institutions			
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC[1]	73,925	60,546	65,089
Credit extended to American International Group, Inc.	38,914	42,871	25,535
Preferred interests in AIA Aurora LLC, and ALICO Holdings LLC	...	...	25,106
Securities held outright			
U.S. Treasury securities	475,921	684,030	776,571
Agency debt securities	19,708	101,701	165,587
Agency mortgage-backed securities (MBS)[2]	...	526,418	1,025,541
Memo			
Term Securities Lending Facility[3]	171,600	4,250	0
Total liabilities	**2,198,794**	**2,025,348**	**2,228,425**
Selected liabilities			
Federal Reserve notes in circulation	853,168	870,327	892,985
Reserve balances of depository institutions	860,000	808,824	1,205,165
U.S. Treasury, general account	106,123	65,234	49,702
U.S. Treasury, supplemental financing account	259,325	199,939	5,000
Total capital	**42,152**	**49,474**	**52,527**

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 had written credit default swap contracts.

2. Includes only MBS purchases that have already settled.

3. The Federal Reserve retained ownership of securities lent through the Term Securities Lending Facility.

... Not applicable.

Source: Federal Reserve Board.

The nontraditional monetary policy actions taken by the Federal Reserve since the onset of the financial crisis expanded the size of the Federal Reserve's balance sheet considerably during 2008, and it remained very large throughout 2009 and into 2010 (table 1). Total Federal Reserve assets on February 17, 2010, stood at about $2.3 trillion. The compositional shifts that had been under way in the first half of 2009 continued during the remainder of the year. Lending to depository institutions as well as credit extended under special liquidity facilities and the temporary liquidity swaps with foreign central banks contracted sharply. By contrast, the large-scale asset purchases conducted by the Federal Reserve boosted securities held outright. Holdings of agency MBS surpassed $1 trillion early this year, up from about $525 billion in mid-July 2009. For other types of securities, the increases were more modest, with holdings of agency debt expanding from about $100 billion in July 2009 to $165 billion in February and holdings of Treasury securities rising from nearly $700 billion to approximately $775 billion over the same period. The revolving credit provided to American International Group, Inc. (AIG), declined near year-end, as the outstanding balance was reduced in exchange for preferred interests in AIA Aurora LLC and ALICO Holdings LLC, which are life insurance holding company subsidiaries of AIG. Loans related to the Maiden Lane facilities—which represent credit extended in conjunction with efforts to avoid disorderly failures of The Bear Stearns Companies, Inc., and AIG—stayed roughly steady. On the liability side of the Federal Reserve's balance sheet, reserve balances increased from slightly more than $800 billion in July to about $1.2 trillion as of February 17, 2010, while the Treasury's supplementary financing account fell to $5 billion; the decline in the supplementary financing account occurred late in 2009 as part of the Treasury's efforts to retain flexibility in debt management as federal debt approached the debt ceiling.

International Developments

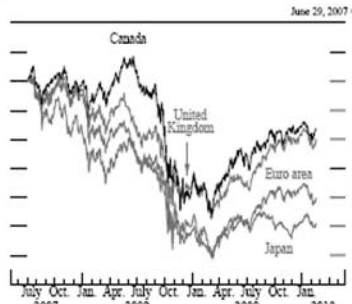
International Financial Markets

Global financial markets recovered considerably in 2009 as the effectiveness of central bank and government actions in stabilizing the financial system became more apparent and as signs of economic recovery began to take hold. Stock markets in the advanced foreign economies registered gains of about 50 percent from their troughs in early March, although they remain below their levels at the start of the financial crisis in August 2007 (figure 46). Stock markets in the emerging market economies rebounded even more impressively over the year. Most Latin American and many emerging Asian stock markets are now close to their levels at the start of the crisis (figure 47).

As global prospects improved, investors shifted away from the safe-haven investments in U.S. securities they had made at the height of the crisis. As a result, the dollar, which had appreciated sharply in late 2008, depreciated against most other currencies in the second and third quarters of 2009. The dollar depreciated particularly sharply against the currencies of major commodity-producing nations, such as Australia and Brazil, as rising commodity prices supported economic recovery in those countries. In the fourth quarter, the dollar stabilized and has since appreciated somewhat, on net, as investors began to focus more on economic news and prospects for the relative strength of the economic recoveries in the United States and elsewhere (figure 48). Chinese authorities held the renminbi steady against the dollar throughout the year. For 2009 as a whole, the dollar depreciated roughly 4½ percent on a trade-weighted basis against the major foreign currencies (figure 49) and 3½ percent against the currencies of the other important trading partners of the United States.

Sovereign bond yields in the advanced economies rose over most of 2009 as investors moved out of safe investments in government securities and became more willing to purchase riskier securities. Concerns about rising budget deficits in many countries and the asso-

46. Equity indexes in selected advanced foreign economies, 2007–10



NOTE: The data are daily. The last observation is February 18, 2010, for the euro area, Japan, and the United Kingdom and February 17, 2010, for Canada.

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.

47. Equity indexes in selected emerging market economies, 2007–10

NOTE: The data are daily. The last observation is February 17, 2010, for Latin America and emerging Asia and February 12, 2010, for China. In this figure, 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, 2005–10

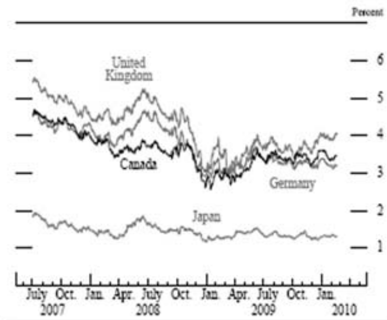
NOTE: The data, which are in foreign currency units per dollar, are daily. The last observation for the series is February 18, 2010. The broad index is a weighted average of the foreign exchange values of the U.S. dollar against the currencies of a large group of the most important U.S. trading partners. 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, Statistical Release H.10, "Foreign Exchange Rates."

49. U.S. dollar exchange rate against selected major currencies, 2008–10

NOTE: The data, which are in foreign currency units per dollar, are daily. The last observation for each series is February 18, 2010.
SOURCE: Federal Reserve Board, Statistical Release H.10, "Foreign Exchange Rates."

50. Yields on benchmark government bonds in selected advanced foreign economies, 2007–10



NOTE: The data, which are for 10-year bonds, are daily. The last observation for each series is February 18, 2010.
SOURCE: Bloomberg.

ciated borrowing needs also likely contributed to the increase in yields. Late in the year, the announcement of a substantial upward revision to the budget deficit in Greece led to a sharp rise in spreads of Greece's sovereign debt over comparable yields on Germany's sovereign debt. These spreads remained elevated in early 2010 and also increased in other euro-area countries with sizable budget deficits, especially Portugal and Spain. Sovereign yields in most of the advanced economies, however, remained significantly lower than prior to the financial crisis, as contained inflation, expectations of only slow economic recovery, and easing of monetary policy by central banks have all worked to keep long-term nominal interest rates low (figure 50).

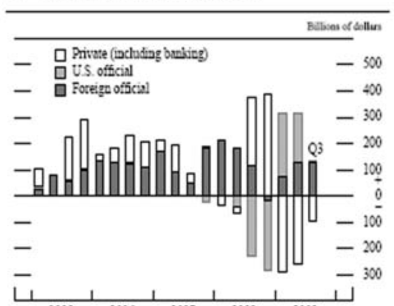
Conditions in global money markets have continued to improve. One-month Libor-OIS spreads in euros and sterling are now less than 10 basis points, near their levels before the crisis. Dollar funding pressures abroad have also substantially abated, and foreign firms are more easily able to obtain dollar funding through private markets such as those for foreign exchange swaps. As a result, drawings on the Federal Reserve's temporary liquidity swap lines by foreign central banks declined in the second half of 2009 to only about $10 billion by the end of the year, and funding markets continued to function without disruption as these swap lines expired on February 1, 2010.

The Financial Account

The pattern of financial flows between the United States and the rest of the world in 2009 reflected the recovery under way in global markets. As the financial crisis eased, net bank lending abroad resumed, but the recovery in portfolio flows was mixed.

Total private financial flows reversed from the large net inflows that had characterized the second half of 2008 to large net outflows in the first half of 2009 (figure 51). This reversal primarily reflected changes in net bank lending. Banks located in the United States had sharply curtailed their lending abroad as the financial crisis intensified in the third and fourth quarters of 2008, and they renewed their net lending as functioning of interbank markets improved in the first half of 2009. During the second half of 2009, interbank market

51. U.S. net financial inflows, 2005–09



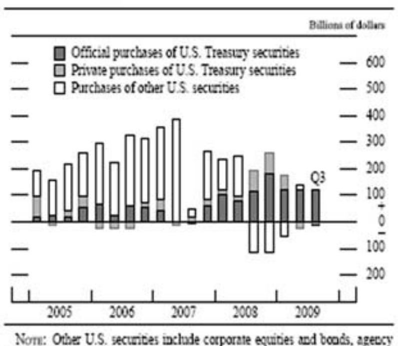
NOTE: U.S. official flows include foreign central banks' drawings on their swap lines with the Federal Reserve.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

conditions continued to normalize, and net bank lending proceeded at a moderate pace. The increased availability of funding in private markets also led to reduced demand from foreign central banks for drawings on the liquidity swap lines with the Federal Reserve. Repayment of the drawings in the first half of 2009 generated sizable U.S. official inflows that offset the large private banking outflows.

Foreign official institutions continued purchasing U.S. Treasury securities at a strong pace throughout 2009, as they had during most of the crisis (figure 52). Foreign exchange intervention by several countries to counteract upward pressure on their currencies gave a boost to these purchases. Countries conducting such intervention bought U.S. dollars in foreign currency markets and acquired U.S. assets, primarily Treasury securities, with the proceeds.

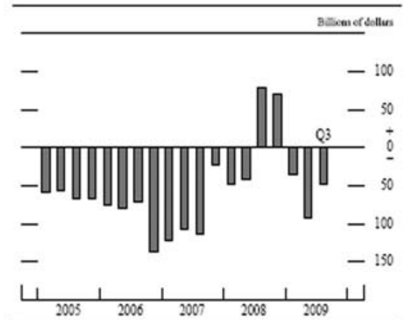
During the height of the crisis, private foreign investors had also purchased record amounts of U.S. Treasury securities, likely reflecting safe-haven demands. Starting in April 2009, as improvement in financial conditions became more apparent, private foreigners began to sell U.S. Treasury securities, but net sales in the second and third quarters were modest compared with the amounts acquired in previous quarters. The recovery in foreign demand for riskier U.S. securities was mixed. Foreign investment in U.S. equities picked up briskly after the first quarter of 2009, nearly reaching a pre-crisis pace. However, foreign investors continued small net sales of U.S. corporate and agency debt. Meanwhile, U.S. investment in foreign securities bounced back quickly and remained strong throughout 2009 (figure 53).

52. Net foreign purchases of U.S. securities, 2005–09



Note: Other U.S. securities include corporate equities and bonds, agency bonds, and municipal bonds.
Source: Department of Commerce, Bureau of Economic Analysis.

53. Net U.S. purchases of foreign securities, 2005–09



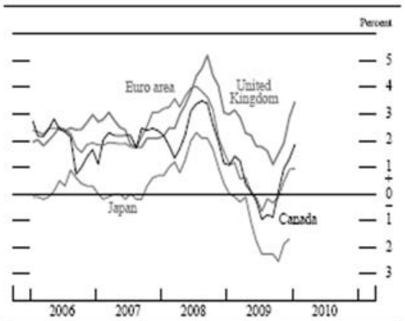
Note: Negative numbers indicate a balance of payments outflow associated with positive U.S. purchases of foreign securities.
Source: Department of Commerce, Bureau of Economic Analysis.

Advanced Foreign Economies

Economic activity in the advanced foreign economies continued to fall sharply in early 2009 but began to recover later in the year as financial conditions improved and world trade rebounded. The robust recovery in emerging Asia helped the Japanese economy to turn up in the second quarter, and other major foreign economies returned to positive economic growth in the second half. Nevertheless, performance has been mixed. Spurred by external demand and a reduction in the pace of inventory destocking, industrial production has risen in most countries but remains well below pre-crisis levels. Business confidence has shown considerable improvement, and survey measures of manufacturing activity have risen as well. Consumer confidence also has improved as financial markets have stabilized, but household finances remain stressed, with unemployment at high levels and wage gains subdued. Although government incentives helped motor vehicle purchases to bounce back from the slump in early 2009, other household spending has remained sluggish in most countries. Housing prices have recovered somewhat in the United Kingdom and more in Canada but have continued to decline in Japan and in some euro-area countries.

Twelve-month consumer price inflation moved lower through the summer, with headline inflation turning negative in all the major advanced foreign countries except the United Kingdom. However, higher energy prices in the second half of 2009 pushed inflation back into positive territory except in Japan (figure 54). Core consumer price inflation, which excludes food and energy, has fluctuated less.

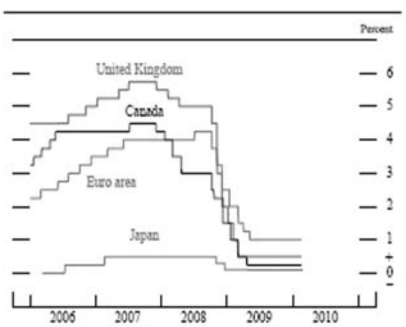
54. Change in consumer prices for major foreign economies, 2006–10



NOTE: The data are monthly, and the percent change is from one year earlier. The data extend through January 2010 for the euro area, Japan, and the United Kingdom and through December 2009 for Canada.
SOURCE: For the euro area, the European Central Bank; for the United Kingdom, the U.K. Office for National Statistics; for Japan, the Japan Statistics Bureau; and, for Canada, Statistics Canada; all via Haver Analytics.

Foreign central banks cut policy rates aggressively during the first half of 2009 and left those rates at historically low levels through year-end (figure 55). The European Central Bank (ECB) has held its main policy rate at 1 percent since May and has made significant amounts of long-term funding available at this rate, allowing overnight interest rates to fall to around 0.35 percent. The Bank of Canada has indicated that it expects to keep its target for the overnight rate at a record low 0.25 percent until at least mid-2010. In addition to their interest rate moves, foreign central banks pursued unconventional monetary easing. The Bank of England continued its purchases of British treasury securities, increasing its Asset Purchase Facility from £50 billion to £200 billion over the course of the year. Amid concerns about persistent deflation, the Bank of Japan announced a new ¥10 trillion three-month secured lending facility at an unscheduled meeting on December 1. The ECB has continued its planned purchases of up to €60 billion in covered bonds, but it has also taken some initial steps toward scaling back its enhanced credit support measures, as it sees reduced need for special programs to provide liquidity.

55. Official or targeted interest rates in selected advanced foreign economies, 2006–10



NOTE: The data are daily and extend through February 18, 2010. The data shown are, for Canada, the overnight rate; for the euro area, the minimum bid rate on main refinancing operations; for Japan, the uncollateralized overnight call 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

Recovery from the global financial crisis has been more pronounced in the emerging market economies than in the advanced foreign economies. In aggregate, emerging market economies continued to contract in the first quarter of 2009, but economic activity in many countries, particularly in emerging Asia, rebounded sharply in the second quarter and remained robust in the second half of the year. The upturn in economic activity was driven largely by domestic demand, which received strong boosts from monetary and fiscal stimulus. By the end of 2009, the level of real GDP in several emerging market economies had recovered to or was approaching pre-crisis peaks. With significant spare capacity as a result of the earlier steep contraction in activity in these economies, inflation remained generally subdued through the first half of last year but moved up in the fourth quarter as adverse weather conditions led to a sharp rise in food prices.

In China, the fiscal stimulus package enacted in November 2008, combined with a surge in bank lending, led to a sharp rise in investment and consumption. Strong domestic demand contributed to a rebound in imports, which helped support economic activity in the rest of Asia and in commodity-exporting countries. Chinese authorities halted the modest appreciation of their currency against the dollar in the middle of 2008, and the exchange rate between the renminbi and the dollar has been unchanged since then. In the second half of 2009, authorities acted to slow the increase in bank lending to a more sustainable pace after the level of outstanding loans rose in the first half of the year by nearly one-fourth of nominal GDP. With the economy booming and inflation picking up, the People's Bank of China (the central bank) increased the required reserve ratio for banks ½ percentage point in January 2010 and again in February, the country's first significant monetary policy tightening moves since the financial crisis. In China and elsewhere in Asia, asset prices have rebounded sharply after falling steeply in the second half of 2008.

In Latin America, the rebound in activity has lagged that in Asia. Economic activity in Mexico, which is more closely tied to U.S. production and was adversely affected by the outbreak of the H1N1 virus last spring, did not turn up until the third quarter of 2009, but it then grew rapidly. In Brazil, the recession was less severe than in Mexico, and economic growth has been fairly strong since the second quarter of last year, supported in part by government stimulus and rising commodity prices.

Russia and many countries in emerging Europe suffered severe output contractions in the first half of 2009 and, in some cases, further financial stresses. In particular, Latvia faced difficulties meeting the fiscal conditions of its international assistance package, which heightened concerns about the survival of the Latvian currency regime. However, economic and financial conditions in emerging Europe began to recover in the second half of the year.

Part 3
Monetary Policy: Recent Developments and Outlook

Monetary Policy over the Second Half of 2009 and Early 2010

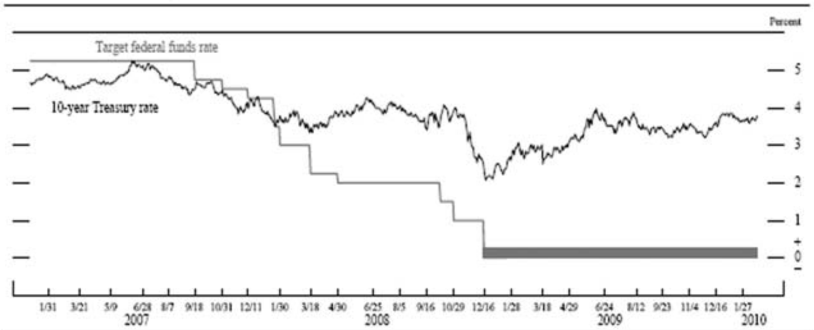
In order to provide monetary stimulus to support a sustainable economic expansion, the Federal Open Market Committee (FOMC) maintained a target range for the federal funds rate of 0 to ¼ percent throughout 2009 and into early 2010 (figure 56). The Federal Reserve also continued its program of large-scale asset purchases, completing purchases of $300 billion in Treasury securities and making considerable progress toward completing its announced purchases of $1.25 trillion of agency mortgage-backed securities (MBS) and about $175 billion of agency debt.

However, with financial market conditions improving, the Federal Reserve took steps to begin winding down many of its special credit and liquidity programs in 2009. On June 25, the Federal Reserve announced that it was extending the authorizations of several of these programs from October 30, 2009, to February 1, 2010. However, the terms of some of these facilities were tightened somewhat, the amounts to be offered under the Term Auction Facility (TAF) were reduced, and the authorization for the Money Market Investor Funding Facility was not extended.[18] Over the summer, the Federal Reserve continued to trim the amounts offered through the TAF.

The information reviewed at the August 11–12 FOMC meeting suggested that overall economic activity was stabilizing after having contracted during 2008 and early 2009. Nonetheless, meeting participants generally saw the economy as likely to recover only slowly during the second half of 2009 and as still vulnerable to adverse shocks. Although housing activity apparently was beginning to turn up, the weak labor market continued to restrain household income, and earlier declines in net worth were still holding back spending. Develop-

18. In particular, the Federal Reserve began requiring money market mutual funds to have experienced redemptions exceeding a certain threshold before becoming eligible to borrow from the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility. The Federal Reserve also suspended auctions conducted under the Term Securities Lending Facility (TSLF) involving only Schedule 1 collateral and reduced the frequency of TSLF auctions involving Schedule 2 collateral. Schedule 1 collateral refers to securities eligible for the open market operations arranged by the Federal Reserve's Open Market Trading Desk—generally Treasury securities, agency debt, or agency MBS. Schedule 2 collateral includes all Schedule 1 collateral as well as investment-grade corporate, municipal, mortgage-backed, and asset-backed securities.

56. Selected interest rates, 2007–10



Note: The data are daily and extend through February 18, 2010. 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.

ments in financial markets leading up to the meeting were broadly positive, and the cumulative improvement in market functioning since the spring was significant. However, the pickup in financial markets was seen as due, in part, to support from various government programs. Moreover, credit remained tight, with many banks reporting that they continued to tighten loan standards and terms. Overall prices for personal consumption expenditures (PCE) rose in June after changing little in each of the previous three months. Excluding food and energy, PCE prices moved up moderately in June.

Given the prospects for an initially modest economic recovery, substantial resource slack, and subdued inflation, the Committee agreed at its August meeting that it should maintain its target range for the federal funds rate at 0 to ¼ percent. FOMC participants expected only a gradual upturn in economic activity and subdued inflation and thought it most likely that the federal funds rate would need to be maintained at an exceptionally low level for an extended period. With the downside risks to the economic outlook now considerably reduced but the economic recovery likely to be subdued, the Committee also agreed that neither expansion nor contraction of its program of asset purchases was warranted at the time. The Committee did, however, decide to gradually slow the pace of the remainder of its purchases of $300 billion of Treasury securities and extend their completion to the end of October to help promote a smooth transition in financial markets. Policymakers noted that, with the programs for purchases of agency debt and MBS not due to expire until the end of the year, they did not need to make decisions at the meeting about any potential modifications to those programs.

By the time of the September 22–23 FOMC meeting, incoming data suggested that overall economic activity was beginning to pick up. Factory output, particularly motor vehicle production, rose in July and August. Consumer spending on motor vehicles during that period was boosted by government rebates and greater dealer incentives. Household spending outside of motor vehicles appeared to rise in August after having been roughly flat from May through July. Sales data for July indicated further increases in the demand for both new and existing single-family homes. Although employment continued to contract in August, the pace of job losses had slowed noticeably from earlier in the year. Developments in financial markets were again regarded as broadly positive; meeting participants saw the cumulative improvement in market functioning and pricing since the spring as substantial. Despite these positive factors, participants still viewed the economic recovery as likely to be quite restrained. Credit from banks remained difficult to obtain and costly for many borrowers; these conditions were expected to improve only gradually. Many regional and small banks were vulnerable to the deteriorating performance of commercial real estate loans. In light of recent experience, consumers were likely to be cautious in spending, and business contacts indicated that their firms would also be cautious in hiring and investing even as demand for their products picked up. Some of the recent gains in economic activity probably reflected support from government policies, and participants expressed considerable uncertainty about the likely strength of the upturn once those supports were withdrawn or their effects waned. Core consumer price inflation remained subdued, while overall consumer price inflation increased in August, boosted by a sharp upturn in energy prices.

Although the economic outlook had improved further and the risks to the forecast had become more balanced, the recovery in economic activity was likely to be protracted. With substantial resource slack likely to persist and longer-term inflation expectations stable, the Committee anticipated that inflation would remain subdued for some time. Under these circumstances, the Committee judged that the costs of the economic recovery turning out to be weaker than anticipated could be relatively high. Accordingly, the Committee agreed to maintain its target range for the federal funds rate at 0 to ¼ percent and to reiterate its view that economic conditions were likely to warrant an exceptionally low level of the federal funds rate for an extended period. With respect to the large-scale asset purchase programs, the Committee indicated its intention to purchase the full $1.25 trillion of agency MBS that it had previously established as the maximum for this program. With respect to agency debt, the Committee agreed to reiterate its intention to purchase up to $200 billion of these securities. To promote a smooth transition in markets as these programs concluded, the Committee decided to gradually slow the pace of both its agency MBS and agency debt purchases and to extend their completion through the end of the first quarter of 2010. To keep inflation expectations well anchored, policymakers agreed on the importance of the Federal Reserve continuing to communicate that it has the tools and willingness to begin withdrawing monetary policy accommodation at the appropriate time and pace to prevent any persistent increase in inflation.

On September 24, the Board of Governors announced a gradual reduction in amounts to be auctioned under the TAF through January and indicated that auctions of credit with maturities longer than 28 days would be phased out by the end of 2009. Usage of the TAF had been declining in recent months as financial market conditions had continued to improve. The Money Market Investor Funding Facility, which had been established in October 2008 to help arrest a run on money market mutual funds, expired as scheduled on October 30, 2009.

At the November 3–4 FOMC meeting, participants agreed that the incoming information suggested that economic activity was picking up as anticipated, with output continuing to expand in the fourth quarter. Business inventories were being brought into better alignment with sales, and the pace of inventory runoff was slowing. The gradual recovery in construction of single-family homes from its extremely low level earlier in the year appeared to be continuing. Consumer spending appeared to be rising even apart from the effects of fiscal incentives to purchase autos. Financial market developments over recent months were generally regarded as supportive of continued economic recovery. Further, the outlook for growth abroad had improved since earlier in the year, especially in Asia, auguring well for U.S. exports. Meanwhile, consumer price inflation remained subdued. In spite of these largely positive developments, participants at the November meeting noted that they were unsure how much of the recent firming in final demand reflected the effects of temporary fiscal programs. Downside risks to economic activity included continued weakness in the labor market and its implications for the growth of household income and consumer confidence. Bank credit remained tight. Nonetheless, policymakers expected the recovery to continue in subsequent quarters, although at a pace that would be rather slow relative to historical experience after severe downturns. FOMC participants noted the possibility that some negative side effects might result from the maintenance of very low short-term interest rates for an extended period, including the possibility that such a policy stance could lead to excessive risk-taking in financial markets or an unanchoring of inflation expectations. The Committee agreed that it was important to remain alert to these risks.

Based on this outlook, the Committee decided to maintain the target range for the federal funds rate at 0 to ¼ percent and noted that economic conditions, including low levels of resource utilization, subdued inflation trends, and stable inflation expectations, were likely to warrant exceptionally low rates for an extended period. With respect to the large-scale asset purchase programs, the Committee reiterated its intention to purchase $1.25 trillion of agency MBS by the end of the first quarter of 2010. Because of the limited availability of agency debt and concerns that larger purchases could impair market functioning, the Committee also agreed to specify that its agency debt purchases would cumulate to about $175 billion by the end of the first quarter, $25 billion less than the previously announced maximum for these purchases. The Committee also decided to reiterate its intention to gradually slow the pace of purchases of agency MBS and agency debt to promote a smooth transition in markets as the announced purchases are completed.

On November 17, the Board of Governors announced that, in light of continued improvement in financial market conditions, in January 2010 the maximum maturity of primary credit loans at the discount window for depository institutions would be reduced to 28 days from 90 days.

The information reviewed at the December 15–16 FOMC meeting suggested that the recovery in economic activity was gaining momentum. Although the unemployment rate remained very elevated and capacity utilization low, the pace of job losses had slowed noticeably since the summer, and industrial production had sustained the broad-based expansion that began in the third quarter. Consumer spending expanded solidly in October. Sales of new homes had risen in October after two months of little change, while sales of existing homes continued to increase strongly. Financial market conditions were generally regarded as having become more supportive of continued economic recovery during the intermeeting period. A jump in energy prices pushed up headline inflation somewhat, but core consumer price inflation remained subdued. Although some of the recent data had been better than anticipated, policymakers generally saw the incoming information as broadly in line with their expectations for a moderate economic recovery and subdued inflation. Consistent with experience following previous financial crises here and abroad, FOMC participants broadly anticipated that the pickup in output and employment would be rather slow relative to past recoveries from deep recessions.

The Committee made no changes to either its large-scale asset purchase programs or its target range for the federal funds rate of 0 to ¼ percent and, based on the outlook for a relatively sluggish economic recovery, decided to reiterate its anticipation that economic conditions, including low levels of resource utilization, subdued inflation trends, and stable inflation expectations, were likely to warrant exceptionally low rates for an extended period. Committee members and Board members agreed that substantial improvements in the functioning of financial markets had occurred; accordingly, they agreed that the statement to be released following the meeting should note the anticipated expiration of most of the Federal Reserve's special liquidity facilities on February 1, 2010.

At the January 26–27 meeting, the Committee agreed that the incoming information, though mixed, indicated that overall economic activity had strengthened in recent months, about as expected. Consumer spending was well maintained in the fourth quarter, and business expenditures on equipment and software appeared to expand substantially. However, the improvement in the housing market slowed, and spending on nonresidential structures continued to fall. Recent data suggested that the pace of inventory liquidation diminished considerably last quarter, providing a sizable boost to economic activity. Indeed, industrial production advanced at a solid rate in the fourth quarter. In the labor market, layoffs subsided noticeably in the final months of last year, but the unemployment rate remained elevated and hiring stayed quite limited. The weakness in labor markets continued to be an important concern for the Committee; moreover, the prospects for job growth remained a significant source of uncertainty in the economic outlook, particularly in the outlook for consumer spending. Financial market conditions were supportive of economic growth. However, net debt financing by nonfinancial businesses was near zero in the fourth quarter after declining in the third, consistent with sluggish demand for credit and tight credit standards and terms at banks. Increases in energy prices pushed up headline consumer price inflation even as core consumer price inflation remained subdued.

In their discussion of monetary policy for the period ahead, the Committee agreed that neither the economic outlook nor financial conditions had changed appreciably since the December meeting and that no changes to the Committee's large-scale asset purchase programs or to its target range for the federal funds rate of 0 to ¼ percent were warranted at this meeting. Further, policymakers reiterated their anticipation that economic conditions, including low levels of resource utilization, subdued inflation trends, and stable inflation expectations, were likely to warrant exceptionally low rates for an extended period. The Committee affirmed its intention to purchase a total of $1.25 trillion of agency MBS and about $175 billion of agency debt by the end of the current quarter and to gradually slow the pace of these purchases to promote a smooth transition in markets. Committee members and Board members agreed that with substantial improvements in most financial markets, including interbank markets, the statement would indicate that on February 1, 2010, the Federal Reserve was closing several special liquidity facilities and that the temporary swap lines with foreign central banks would expire. In addition, the statement would say that the Federal Reserve was in the process of winding down the TAF and that the final auction would take place in March 2010.

On February 1, 2010, given the overall improvement in funding markets, the Federal Reserve allowed the Primary Dealer Credit Facility, the Term Securities Lending Facility, the Commercial Paper Funding Facility, and the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility to expire. The temporary swap lines with foreign central banks were closed on the same day. On February 18, 2010, the Federal Reserve announced a further normalization of the terms of loans made under the primary credit facility: The rate charged on these loans was increased from ½ percent to ¾ percent, effective on February 19, and the typical maximum maturity for such loans was shortened to overnight, effective on March 18, 2010. On the same day, the Federal Reserve also announced that the minimum bid rate on the final TAF auction on March 8 had been raised to 50 basis points, ¼ percentage point higher than in previous auctions. The Federal Reserve noted that the modifications are not expected to lead to tighter financial conditions for households and businesses and do not signal any change in the outlook for the economy or for monetary policy.

Over the course of 2009, the Federal Reserve continued to undertake initiatives to improve communications about its policy actions. These initiatives are described in detail in the box "Federal Reserve Initiatives to Increase Transparency."

Monetary Policy as the Economy Recovers

The actions taken by the Federal Reserve to support financial market functioning and provide extraordinary monetary stimulus to the economy have led to a rapid expansion of the Federal Reserve's balance sheet, from less than $900 billion before the crisis began in 2007 to about $2.3 trillion currently. The expansion of the Federal Reserve's balance sheet has been accompanied by a comparable increase in the quantity of reserve balances held by depository institutions. Bank reserves are currently far above their levels prior to the crisis. Even though, as noted in recent statements of the FOMC, economic conditions are likely to warrant exceptionally low rates for an extended period, in due course, as the expansion matures, the Federal Reserve will need to begin to tighten monetary conditions to prevent the development of inflation pressures. That tightening will be accomplished partly through changes that will affect the composition and size of the Federal Reserve's balance sheet. Eventually, the level of reserves and the size of the Federal Reserve's balance sheet will be reduced substantially.

The Federal Reserve has a number of tools that will enable it to firm the stance of policy at the appropriate time and to the appropriate degree, some of which do not affect the size of the balance sheet or the quantity of reserves. Most importantly, in October 2008 the Congress gave the Federal Reserve statutory authority to pay interest on banks' holdings of reserve balances at Federal Reserve Banks. By increasing the interest rate paid on reserves, the Federal Reserve will be able to put significant upward pressure on all short-term interest rates, because banks will not supply short-term funds to the money markets at rates significantly below what they can earn by simply leaving funds on deposit at the Federal Reserve Banks. Actual and prospective increases in short-term interest rates will be reflected, in turn, in longer-term interest rates and in financial conditions more generally through standard transmission mechanisms, thus preventing inflationary pressures from developing.

The Federal Reserve has also been developing a number of additional tools that will reduce the quantity of reserves held by the banking system and lead to a tighter relationship between the interest rate that the Federal Reserve pays on banks' holdings of reserve balances and other short-term interest rates. Reverse repurchase agreements (reverse repos) are one such tool; in a reverse repo, the Federal Reserve sells a security to a counterparty with an agreement to repurchase it at some specified date in the future. The counterparty's payment to the Federal Reserve has the effect of draining an equal quantity of reserves from the banking system. Recently, by developing the capacity to conduct such transactions in the triparty repo market, the Federal Reserve has enhanced its ability to use reverse repos to absorb very large quantities of reserves. The capability to carry out these transactions with primary dealers, using the Federal Reserve's holdings of Treasury and agency debt securities, has already been tested and is currently available if and when needed. To further increase its capacity to drain reserves through reverse repos, the Federal Reserve is also in the process of expanding the set of counterparties with which it can transact and is developing the infrastructure necessary to use its MBS holdings as collateral in these transactions.

As a second means of draining reserves, the Federal Reserve is also developing plans to offer to depository institutions term deposits, which are roughly analogous to certificates of deposit that the institutions offer to their customers. The Federal Reserve would likely offer large blocks of such deposits through an auction mechanism. The effect of these transactions would be to convert a portion of depository institutions' holdings of reserve balances into deposits that could not be used to meet depository institutions' very short-term liquidity needs and could not be counted as reserves. The Federal Reserve published in the *Federal Register* a proposal for such a term deposit facility and is in the process of reviewing the public comments received. After a revised proposal is approved by the Board, the Federal Reserve expects to be able to conduct test transactions in the spring and to have the facility available if necessary shortly thereafter. Reverse repos and the deposit facility would together allow the Federal Reserve to drain hundreds of billions of dollars of reserves from the banking system quite quickly should it choose to do so.

The Federal Reserve also has the option of redeeming or selling securities as a means of applying monetary restraint. A reduction in securities holdings would have the effect of further reducing the quantity of reserves in the banking system as well as reducing the overall size of the Federal Reserve's balance sheet. It would likely also put at least some direct upward pressure on longer-term yields.

The Treasury's temporary Supplementary Financing Program (SFP)—through which the Treasury issues Treasury bills to the public and places the proceeds in a special deposit account at the Federal Reserve—could also be used to drain reserves and support the Federal Reserve's control of short-term interest rates. However, the use of the SFP must be compatible with the Treasury's debt-management objectives. The SFP is not a necessary element in the Federal Reserve's set of tools to achieve an appropriate monetary policy stance in the future; still, any amount outstanding under the SFP will result in a corresponding decrease in the quantity of reserves in the banking system, which could be helpful in the Federal Reserve's conduct of policy.

The exact sequence of steps and combination of tools that the Federal Reserve chooses to employ as it exits from its current very accommodative policy stance will depend on economic and financial developments. One possible trajectory would be for the Federal Reserve to continue to test its tools for draining reserves on a limited basis in order to further ensure preparedness and to give market participants a period of time to become familiar with their operation. As the time for the removal of policy accommodation draws near, those operations could be scaled up to drain more-significant volumes of reserve balances to provide tighter control over short-term interest rates. The actual firming of policy would then be implemented through an increase in the interest rate paid on reserves. If economic and

Federal Reserve Initiatives to Increase Transparency

Transparency is a key tenet of modern central banking both because it contributes importantly to the accountability of central banks to the government and the public and because it can enhance the effectiveness of central banks in achieving their macroeconomic objectives. In recognition of the importance of transparency, the Federal Reserve has provided detailed information on the nontraditional policy actions taken to address the financial crisis, and generally aims to maximize the amount of information it can provide to the public consistent with its broad policy objectives.

The Federal Reserve has significantly enhanced its transparency in a number of important dimensions over recent years. On matters related to the conduct of monetary policy, the Federal Reserve has long been one of the most transparent central banks in the world. Following each of its meetings, the Federal Open Market Committee (FOMC) releases statements that provide a rationale for the policy decision, along with a record of the Committee's vote and explanations for any dissents. In addition, detailed minutes of each FOMC meeting are made public three weeks following the meeting. The minutes provide a great deal of information about the range of policymakers' views on the economic situation and outlook as well as on their deliberations about the appropriate stance of monetary policy. Recently, the Federal Reserve further advanced transparency by initiating a quarterly Summary of Economic Projections of Federal Reserve Board members and Reserve Bank presidents. These projections and the accompanying summary analysis contain detailed information regarding policymakers' views about the future path of real gross domestic product, inflation, and unemployment, including the long-run values of these variables assuming appropriate monetary policy.[1]

During the financial crisis, the Federal Reserve implemented a number of credit and liquidity programs to support the functioning of key financial markets and institutions and took complementary steps to ensure appropriate transparency and accountability in operating these programs. The Board's weekly H.4.1 statistical release has been greatly expanded to provide detailed information on the Federal Reserve's balance sheet and the operation of the various credit and liquidity facilities.[2] The release is closely watched in financial markets and by the public for nearly real-time information on the evolution of the Federal Reserve's balance sheet.

The Federal Reserve also developed a public website focused on its credit and liquidity programs that provides background information on all the facilities.[3] In addition, starting in December 2008 the Federal Reserve has issued bimonthly reports to the Congress in fulfillment of section 129 of the Emergency Economic Stabi-

1. FOMC statements and minutes, the Summary of Economic Projections, and other related information are available on the Federal Reserve Board's website. See Board of Governors of the Federal Reserve System, "Federal Open Market Committee," webpage, www.federalreserve.gov/monetarypolicy/fomc.htm.

2. Board of Governors of the Federal Reserve System, Statistical Release H.4.1, "Factors Affecting Reserve Balances," webpage, www.federalreserve.gov/releases/h41.

3. Board of Governors of the Federal Reserve System, "Credit and Liquidity Programs and the Balance Sheet," webpage, www.federalreserve.gov/monetarypolicy/bst.htm.

financial developments were to require a more rapid exit from the current highly accommodative policy, however, the Federal Reserve could increase the interest rate on reserves at about the same time it commences draining operations.

The Federal Reserve currently does not anticipate that it will sell any of its securities holding in the near term, at least until after policy tightening has gotten under way and the economy is clearly in a sustainable recovery. However, to help reduce the size of its balance sheet and the quantity of reserves, the Federal Reserve is allowing agency debt and MBS to run off as they mature or are prepaid. The Federal Reserve is rolling over all maturing Treasury securities, but in the future it might decide not to do so in all cases. In the long run, the Federal Reserve anticipates that its balance sheet will shrink toward more historically normal levels and that most or all of its securities holdings will be Treasury securities. Although passively redeeming agency debt and MBS as they mature or are prepaid will move the Federal Reserve in that direction, the Federal Reserve may also choose to sell securities in the future when the economic recovery is sufficiently advanced and the FOMC has determined that the associated financial tightening is warranted. Any such sales would be gradual, would be clearly communicated to market participants, and would entail appropriate consideration of economic conditions.

lization Act of 2008; in October 2009, the Federal Reserve began incorporating these reports into its monthly report on credit and liquidity programs and the balance sheet.[4] The monthly report, which is available on the Federal Reserve's website, provides more-detailed information on the full range of credit and liquidity programs implemented during the crisis. This report includes data on the number and types of borrowers using various facilities and on the types and value of collateral pledged; information on the assets held in the so-called Maiden Lane facilities—created to acquire certain assets of The Bear Stearns Companies, Inc., and of American International Group, Inc. (AIG)—and in other special lending facilities; and quarterly financial statements for the Federal Reserve System. Furthermore, the monthly reports provide detailed information on all of the programs that rely on emergency lending authorities, including the Federal Reserve's assessment of the expected cost to the Federal Reserve and the U.S. taxpayer of various Federal Reserve programs implemented during the crisis. To provide further transparency regarding its transactions with AIG, the Federal Reserve recently indicated that it would welcome a full review by the Government Accountability Office of all aspects of the Federal Reserve's involvement with the extension of credit to AIG.[5]

4. Board of Governors of the Federal Reserve System, *Federal Reserve System Monthly Report on Credit and Liquidity Programs and the Balance Sheet* (Washington: Board of Governors).

5. Ben S. Bernanke (2010), letter to Gene L. Dodaro, January 19, www.federalreserve.gov/monetarypolicy/files/letter_aig_20100119.pdf.

The Federal Reserve has also been transparent about the management of its programs. Various programs employ private-sector firms as purchasing and settlement agents and to perform other functions; the contracts for all of these vendor arrangements are available on the website of the Federal Reserve Bank of New York.[6] Moreover, the Federal Reserve has recently begun to publish detailed CUSIP-number-level data regarding its holdings of Treasury, agency, and agency mortgage-backed securities; these data provide the public with precise information about the maturity and asset composition of the Federal Reserve's securities holdings.[7] On January 11, 2010, the Federal Reserve Bank of New York published a revised policy governing the designation of primary dealers.[8] An important motivation in issuing revised guidance in this area was to make the process for becoming a primary dealer more transparent.

6. Federal Reserve Bank of New York, "Vendor Information," webpage, www.newyorkfed.org/aboutthefed/vendor_information.html.

7. Federal Reserve Bank of New York, "System Open Market Account Holdings," webpage, www.newyorkfed.org/markets/soma/sysopen_accholdings.html.

CUSIP is the abbreviation for Committee on Uniform Securities Identification Procedures. A CUSIP number identifies most securities, including stocks of all registered U.S. and Canadian companies and U.S. government and municipal bonds. The CUSIP system—owned by the American Bankers Association and operated by Standard & Poor's—facilitates the clearing and settlement process of securities.

8. Federal Reserve Bank of New York (2010), "New York Fed Publishes Revised Policy for Administration of Primary Dealer Relationships," press release, January 11, www.newyorkfed.org/newsevents/news/markets/2010/ma100111.html.

As a result of the very large volume of reserves in the banking system, the level of activity and liquidity in the federal funds market has declined considerably, raising the possibility that the federal funds rate could for a time become a less reliable indicator than usual of conditions in short-term money markets. Accordingly, the Federal Reserve is considering the utility, during the transition to a more normal policy configuration, of communicating the stance of policy in terms of another operating target, such as an alternative short-term interest rate. In particular, it is possible that the Federal Reserve could for a time use the interest rate paid on reserves, in combination with targets for reserve quantities, as a guide to its policy stance, while simultaneously monitoring a range of market rates. No decision has been made on this issue, and any deliberation will be guided in part by the evolution of the federal funds market as policy accommodation is withdrawn. The Federal Reserve anticipates that it will eventually return to an operating framework with much lower reserve balances than at present and with the federal funds rate as the operating target for policy.

Part 4
Summary of Economic Projections

The following material appeared as an addendum to the minutes of the January 26–27, 2010, meeting of the Federal Open Market Committee.

In conjunction with the January 26–27, 2010, 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, submitted projections for output growth, unemployment, and inflation for the years 2010 to 2012 and over the longer run. The projections were based on information available through the end of the meeting and on each participant's assumptions about factors likely to affect economic outcomes, including his or her assessment of appropriate monetary policy. "Appropriate monetary policy" is defined as the future path of policy that the participant deems most likely to foster outcomes for economic activity and inflation that best satisfy his or her interpretation of the Federal Reserve's dual objectives of maximum employment and stable prices. 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' forecasts for economic activity and inflation were broadly similar to their previous projections, which were made in conjunction with the November 2009 FOMC meeting. As depicted in figure 1, the economic recovery from the recent recession was expected to be gradual, with real gross domestic product (GDP) expanding at a rate that was only moderately above participants' assessment of its longer-run sustainable growth rate and the unemployment rate declining slowly over the next few years. Most participants also anticipated that inflation would remain subdued over this period. As indicated in table 1, a few participants made modest upward revisions to their projections for real GDP growth in 2010. Beyond 2010, however, the contours of participants' projections for economic activity and inflation were little changed, with participants continuing to expect that the pace of the economic recovery will be restrained by household and business uncertainty, only gradual improvement in labor market conditions, and slow easing of credit conditions in the banking sector. Participants generally expected that it would take some time for the economy to converge fully to its longer-run path—characterized by a sustainable rate of output growth and by rates of employment and inflation consistent with their interpretation of the Federal Reserve's dual objectives—with a sizable minority of the view that the convergence process could take more than five to six years. As in

Table 1. Economic projections of Federal Reserve Governors and Reserve Bank presidents, January 2010
Percent

Variable	Central tendency[1]				Range[2]			
	2010	2011	2012	Longer run	2010	2011	2012	Longer run
Change in real GDP	2.8 to 3.5	3.4 to 4.5	3.5 to 4.5	2.5 to 2.8	2.3 to 4.0	2.7 to 4.7	3.0 to 5.0	2.4 to 3.0
November projection	2.5 to 3.5	3.4 to 4.5	3.5 to 4.8	2.5 to 2.8	2.0 to 4.0	2.5 to 4.6	2.8 to 5.0	2.4 to 3.0
Unemployment rate	9.5 to 9.7	8.2 to 8.5	6.6 to 7.5	5.0 to 5.2	8.6 to 10.0	7.2 to 8.8	6.1 to 7.6	4.9 to 6.3
November projection	9.3 to 9.7	8.2 to 8.6	6.8 to 7.5	5.0 to 5.2	8.6 to 10.2	7.2 to 8.7	6.1 to 7.6	4.8 to 6.3
PCE inflation	1.4 to 1.7	1.1 to 2.0	1.3 to 2.0	1.7 to 2.0	1.2 to 2.0	1.0 to 2.4	0.8 to 2.0	1.5 to 2.0
November projection	1.3 to 1.6	1.0 to 1.9	1.2 to 1.9	1.7 to 2.0	1.1 to 2.0	0.6 to 2.4	0.2 to 2.3	1.5 to 2.0
Core PCE inflation[3]	1.1 to 1.7	1.0 to 1.9	1.2 to 1.9		1.0 to 2.0	0.9 to 2.4	0.8 to 2.0	
November projection	1.0 to 1.5	1.0 to 1.6	1.0 to 1.7		0.9 to 2.0	0.5 to 2.4	0.2 to 2.3	

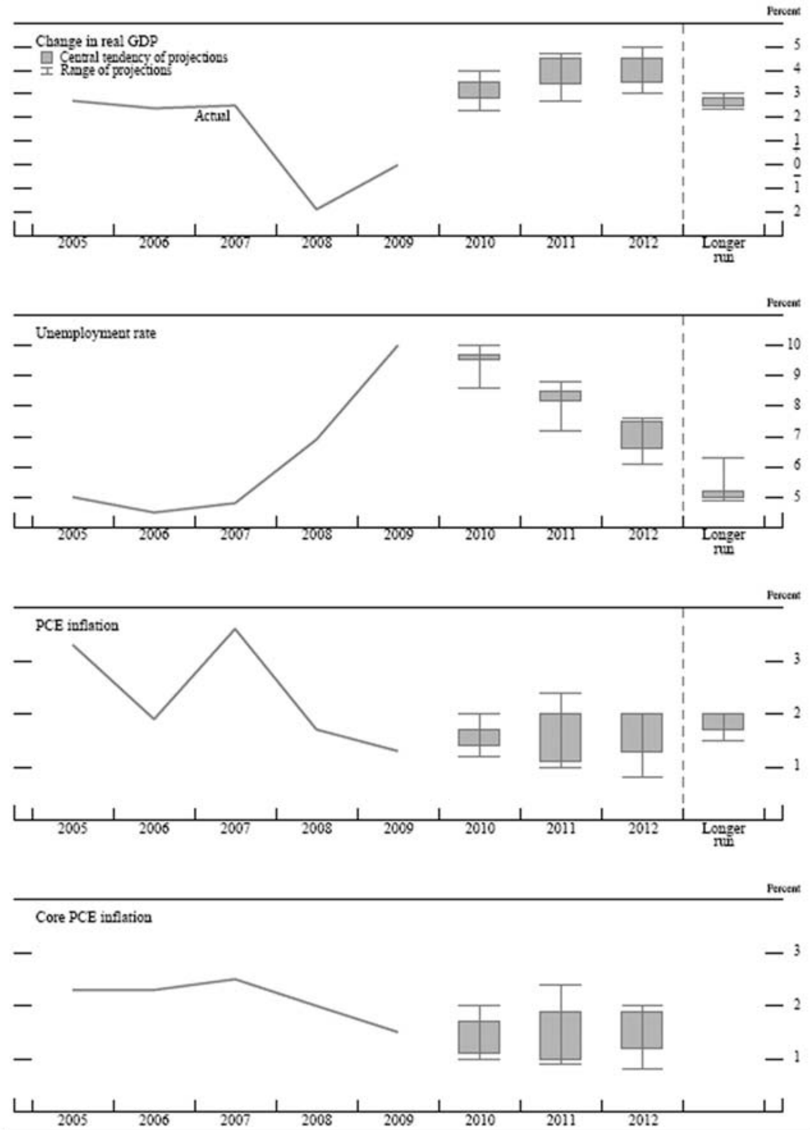
NOTE: Projections of change in real gross domestic product (GDP) and in inflation are from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption 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 November projections were made in conjunction with the meeting of the Federal Open Market Committee on November 3–4, 2009.

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 consists of 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, 2010–12 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 data for the change in real GDP, PCE inflation, and core PCE inflation shown for 2009 incorporate the advance estimate of GDP for the fourth quarter of 2009, which the Bureau of Economic Analysis released on January 29, 2010; this information was not available to FOMC meeting participants at the time of their meeting.

November, nearly all participants judged the risks to their growth outlook as generally balanced, and most also saw roughly balanced risks surrounding their inflation projections. Participants continued to judge the uncertainty surrounding their projections for economic activity and inflation as unusually high relative to historical norms.

The Outlook

Participants' projections for real GDP growth in 2010 had a central tendency of 2.8 to 3.5 percent, a somewhat narrower interval than in November. Recent readings on consumer spending, industrial production, and business outlays on equipment and software were seen as broadly consistent with the view that economic recovery was under way, albeit at a moderate pace. Businesses had apparently made progress in bringing their inventory stocks into closer alignment with sales and hence would be likely to raise production as spending gained further momentum. Participants pointed to a number of factors that would support the continued expansion of economic activity, including accommodative monetary policy, ongoing improvements in the conditions of financial markets and institutions, and a pickup in global economic growth, especially in emerging market economies. Several participants also noted that fiscal policy was currently providing substantial support to real activity, but said that they expected less impetus to GDP growth from this factor later in the year. Many participants indicated that the expansion was likely to be restrained not only by firms' caution in hiring and spending in light of the considerable uncertainty regarding the economic outlook and general business conditions, but also by limited access to credit by small businesses and consumers dependent on bank-intermediated finance.

Looking further ahead, participants' projections were for real GDP growth to pick up in 2011 and 2012; the projections for growth in both years had a central tendency of about 3½ to 4½ percent. As in November, participants generally expected that the continued repair of household balance sheets and gradual improvements in credit availability would bolster consumer spending. Responding to an improved sales outlook and readier access to bank credit, businesses were likely to increase production to rebuild their inventory stocks and increase their outlays on equipment and software. In addition, improved foreign economic conditions were viewed as supporting robust growth in U.S. exports. However, participants also indicated that elevated uncertainty on the part of households and businesses and the very slow recovery of labor markets would likely restrain the pace of expansion. Moreover, although conditions in the banking system appeared to have stabilized, distress in commercial real estate markets was expected to pose risks to the balance sheets of banking institutions for some time, thereby contributing to only gradual easing of credit conditions for many households and smaller firms. In the absence of further shocks, participants generally anticipated that real GDP growth would converge over time to an annual rate of 2.5 to 2.8 percent, the longer-run pace that appeared to be sustainable in view of expected demographic trends and improvements in labor productivity.

Participants anticipated that labor market conditions would improve only slowly over the next several years. Their projections for the average unemployment rate in the fourth quarter of 2010 had a central tendency of 9.5 to 9.7 percent, only a little below the levels of about 10 percent that prevailed late last year. Consistent with their outlook for moderate output growth, participants generally expected that the unemployment rate would decline only about 2½ percentage points by the end of 2012 and would still be well above its longer-run sustainable rate. Some participants also noted that considerable uncertainty surrounded their estimates of the productive potential of the economy and the sustainable rate of employment, owing partly to substantial ongoing structural adjustments in product and labor markets. Nonetheless, participants' longer-run unemployment projections had a central tendency of 5.0 to 5.2 percent, the same as in November.

Most participants anticipated that inflation would remain subdued over the next several years. The central tendency of their projections for personal consumption expenditures (PCE) inflation was 1.4 to 1.7 percent for 2010, 1.1 to 2.0 percent for 2011, and 1.3 to 2.0 percent for 2012. Many participants anticipated that global economic growth would spur increases in energy prices, and hence that headline PCE inflation would run slightly above core PCE inflation over the next year or two. Most expected that substantial resource slack would continue to restrain cost pressures, but that inflation would rise gradually toward their individual assessments of the measured rate of inflation judged to be most consistent with the Federal Reserve's dual mandate. As in November, the central tendency of projections of the longer-run inflation rate was 1.7 to 2.0 percent. A majority of participants anticipated that inflation in 2012 would still be below their assessments of the mandate-consistent inflation rate, while the remainder expected that inflation would be at or slightly above its longer-run value by that time.

Uncertainty and Risks

Nearly all participants shared the judgment that their projections of future economic activity and unemployment continued to be subject to greater-than-average uncertainty.[19] Participants generally saw the risks to these projections as roughly balanced, although a few indicated that the risks to the unemployment outlook remained tilted to the upside. As in November, many participants highlighted the difficulties inherent in predicting macroeconomic outcomes in the wake of a financial crisis and a severe recession. In addition, some pointed to uncertainties regarding the extent to which the recent run-up in labor productivity would prove to be persistent, while others noted the risk that the deteriorating performance of commercial real estate could adversely affect the still-fragile state of the banking system and restrain the growth of output and employment over coming quarters.

As in November, most participants continued to see the uncertainty surrounding their inflation projections as higher than historical norms. However, a few judged that uncertainty in the outlook for inflation was about in line with typical levels, and one viewed the uncertainty surrounding the inflation outlook as lower than average. Nearly all participants judged the risks to the inflation outlook as roughly balanced; however, two saw these risks as tilted to the upside, while one regarded the risks as weighted to the downside. Some participants noted that inflation expectations could drift downward in response to persistently low inflation and continued slack in resource utilization. Others pointed to the possibility of an upward shift in expected and actual inflation, especially if extraordinarily accommodative monetary policy measures were not unwound in a timely fashion. Participants also noted that an acceleration in global economic activity could induce a surge in the prices of energy and other commodities that would place upward pressure on overall inflation.

Diversity of Views

Figures 2.A and 2.B provide further details on the diversity of participants' views regarding the likely outcomes for real GDP growth and the unemployment rate in 2010, 2011, 2012, and over the longer run. The distribution of participants' projections for real GDP growth this year was slightly narrower than the distribution of their projections last November, but the distributions of the projections for real GDP growth in 2011 and in 2012 were little changed. The dispersion in participants' output growth projections reflected, among other factors, the diversity of their assessments regarding the current degree of underlying momentum in economic activity, the evolution of consumer and business sentiment, and the likely pace of easing of bank lending standards and terms. Regarding participants' unemployment rate projections, the distribution for 2010 narrowed slightly, but the distributions of their unemployment rate projections for 2011 and 2012 did not change appreciably. The distributions of participants' estimates of the longer-run sustainable rates of output growth and unemployment were essentially the same as in November.

Figures 2.C and 2.D provide corresponding information about the diversity of participants' views regarding the inflation outlook. For overall and core PCE inflation, the distributions of participants' projections for 2010 were nearly the same as in November. The distributions of overall and core inflation for 2011 and 2012, however, were noticeably more tightly concentrated than in November, reflecting the absence of forecasts of especially low inflation. The dispersion in participants' projections over the next few years was mainly due to differences in their judgments regarding the determinants of inflation, including their estimates of prevailing resource slack and their assessments of the extent to which such slack affects actual and expected inflation. In contrast, the relatively tight distribution of

Table 2. Average historical projection error ranges
Percentage points

Variable	2010	2011	2012
Change in real GDP[1]	±1.3	±1.5	±1.6
Unemployment rate[1]	±0.6	±0.8	±1.0
Total consumer prices[2]	±0.9	±1.0	±1.0

Note: Error ranges shown are measured as plus or minus the root mean squared error of projections for 1989 through 2008 that were released in the winter 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 (Washington: Board of Governors of the Federal Reserve System, November).

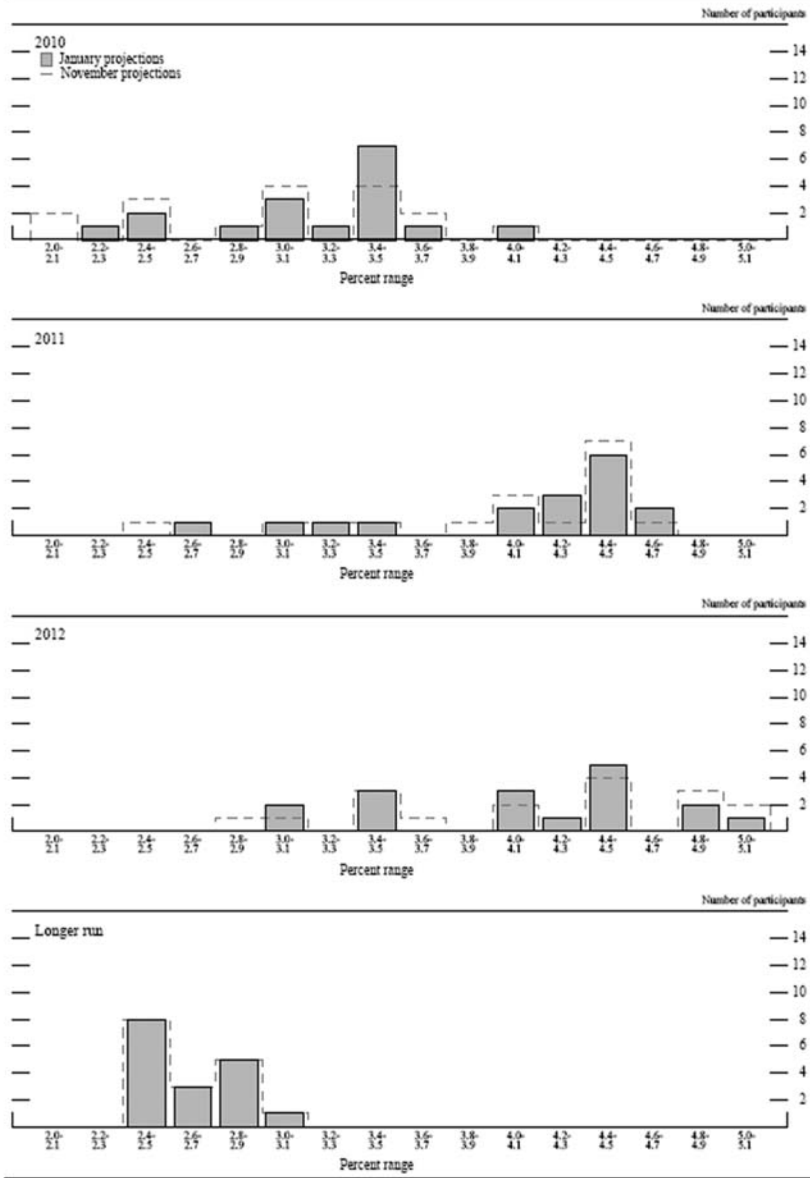
1. For definitions, refer to general note in table 1.

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.

19. 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 1989 to 2008. 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 risk attending participants' projections.

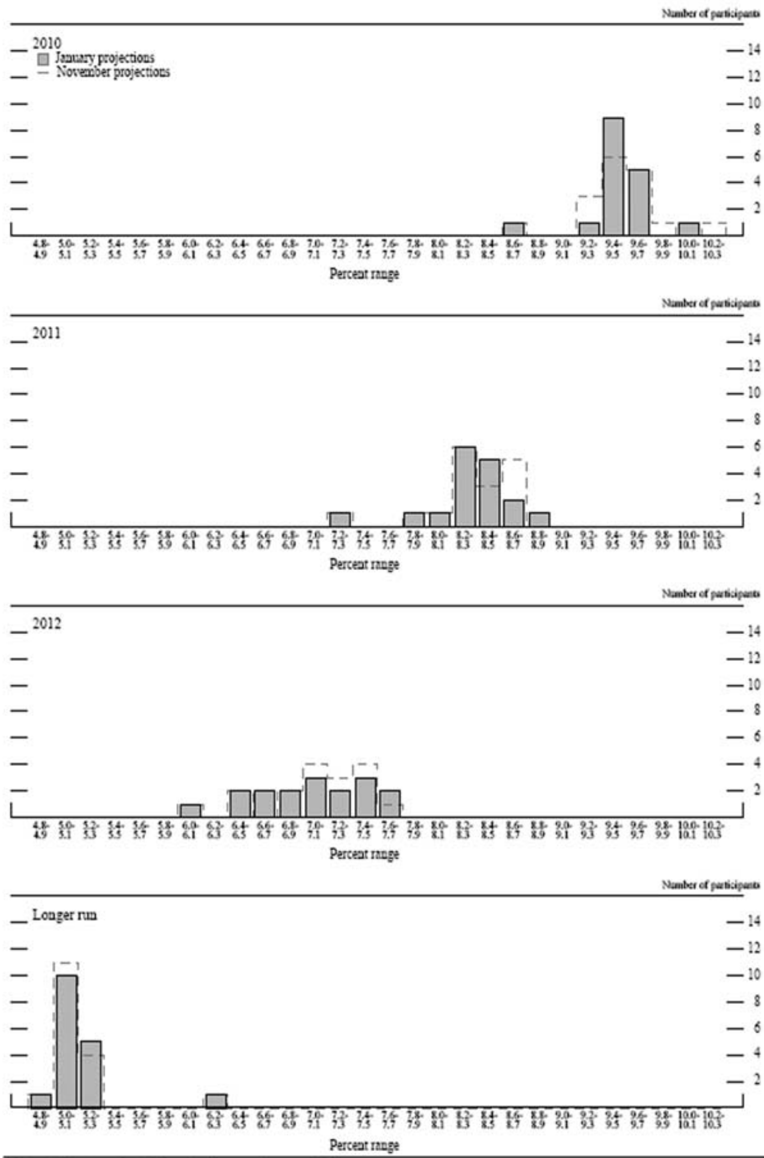
participants' projections for longer-run inflation illustrates their substantial agreement about the measured rate of inflation that is most consistent with the Federal Reserve's dual objectives of maximum employment and stable prices.

Figure 2.A. Distribution of participants' projections for the change in real GDP, 2010–12 and over the longer run



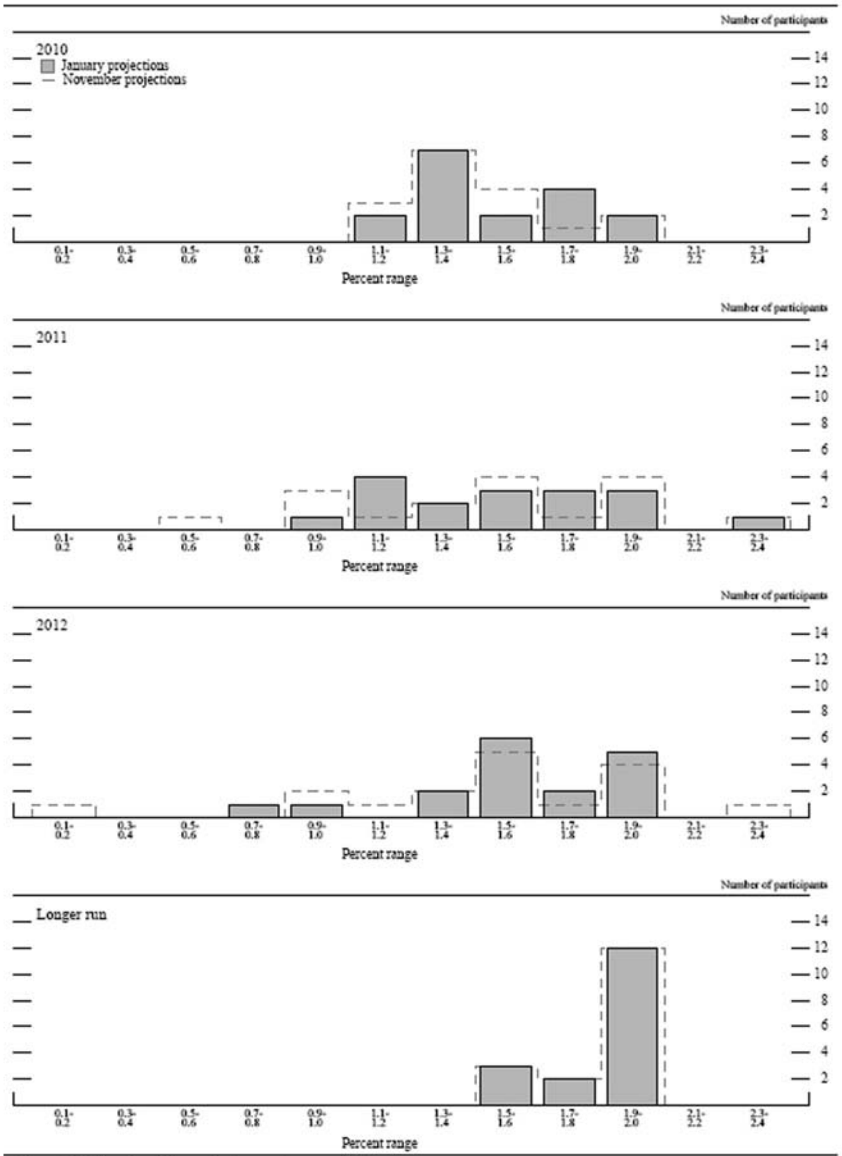
NOTE: Definitions of variables are in the general note to table 1.

Figure 2.B. Distribution of participants' projections for the unemployment rate, 2010–12 and over the longer run



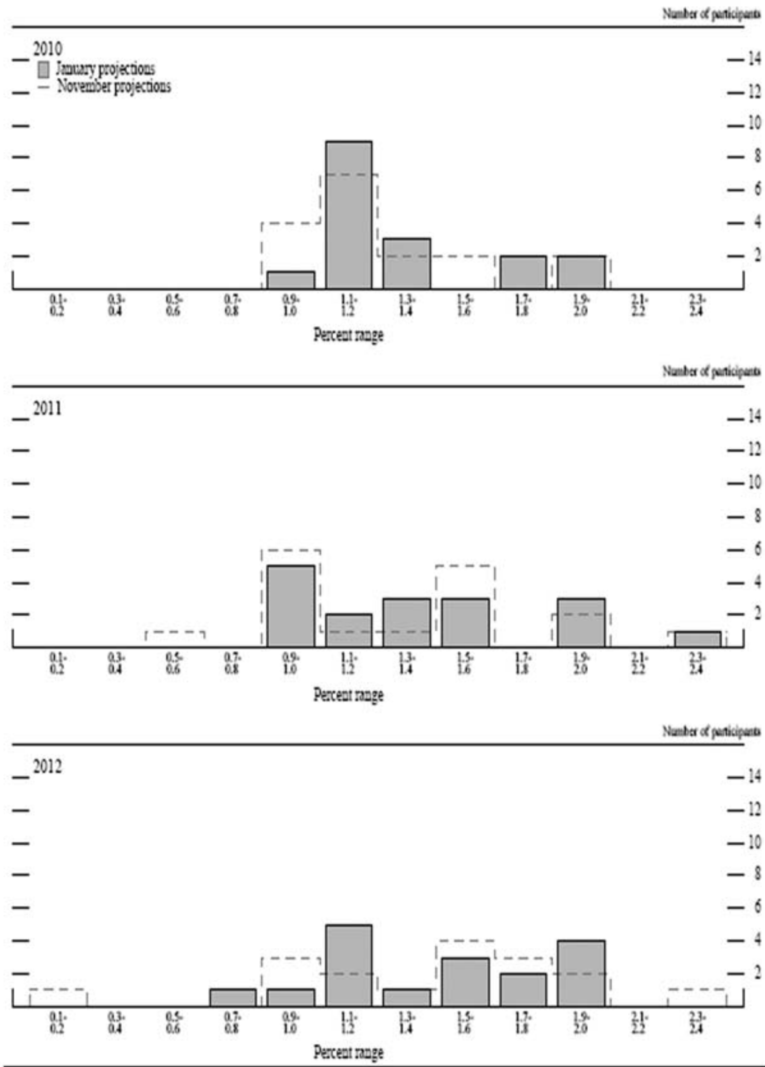
NOTE: Definitions of variables are in the general note to table 1.

Figure 2.C. Distribution of participants' projections for PCE inflation, 2010–12 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, 2010–12



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 gross domestic product (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 within a range of 1.7 to 4.3 percent in the current year, 1.5 to 4.5 percent in the second year, and 1.4 to 4.6 percent in the third year. The corresponding 70 percent confidence intervals for overall inflation would be 1.1 to 2.9 percent in the current year and 1.0 to 3.0 percent in the second and third years.

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, are weighted to the 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.

Abbreviations

ABS	asset-backed securities
AIG	American International Group, Inc.
ARRA	American Recovery and Reinvestment Act
CDS	credit default swap
C&I	commercial and industrial
CMBS	commercial mortgage-backed securities
CRE	commercial real estate
Credit CARD Act	Credit Card Accountability Responsibility and Disclosure Act
CUSIP	Committee on Uniform Securities Identification Procedures
ECB	European Central Bank
E&S	equipment and software
FAS	Financial Accounting Standards
FDIC	Federal Deposit Insurance Corporation
FHA	Federal Housing Administration
FOMC	Federal Open Market Committee; also, the Committee
GDP	gross domestic product
GSE	government-sponsored enterprise
Libor	London interbank offered rate
LLC	limited liability company
MBS	mortgage-backed securities
NFIB	National Federation of Independent Business
NIPA	national income and product accounts
OIS	overnight index swap
PCE	personal consumption expenditures
repo	repurchase agreement
SCAP	Supervisory Capital Assessment Program
SFP	Supplementary Financing Program
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
TAF	Term Auction Facility
TALF	Term Asset-Backed Securities Loan Facility
TARP	Troubled Asset Relief Program
TIPS	Treasury inflation-protected securities

RESPONSE TO WRITTEN QUESTIONS OF SENATOR SHELBY FROM BEN S. BERNANKE

Emergency Lending Under Section 13(3)

Q.1.a. Charles Plosser, President of the Federal Reserve Bank of Philadelphia, stated in a recent speech his belief that the Fed's emergency 13(3) lending authority should be either eliminated or severely curtailed ("The Federal Reserve System: Balancing Independence and Accountability," presented February 17, 2010 by President Plosser to the World Affairs Council of Philadelphia). He stated:

> I believe that the Fed's 13(3) lending authority should be either eliminated or severely curtailed. Such lending should be done by the fiscal authorities only in emergencies and, if the Fed is involved, only upon the written request of the Treasury. Any non-Treasury securities or collateral acquired by the Fed under such lending should be promptly swapped for Treasury securities so that it is clear that the responsibility and accountability for such lending rests explicitly with the fiscal authorities, not the Federal Reserve. To codify this arrangement, I believe we should establish a new Fed-Treasury Accord. This would eliminate the ability of the Fed to engage in 'bailouts' of individual firms or sectors and place such responsibility with the Treasury and Congress, squarely where it belongs.

Do you agree with President Plosser?

A.1.a Since the fall of 2008, I have advocated that Congress establish a statutory resolution regime that provides a workable alternative to Government bailouts and disorderly bankruptcies. With enactment of a workable resolution regime for systemically important firms, I have also called for removal of the Federal Reserve's authority under section 13(3) to extend credit to troubled nonbanking entities.

However, I believe that it would be appropriate for the Federal Reserve to retain the authority to lend to establish broad market-based credit facilities in unusual and exigent circumstances. In exceptional circumstances the preservation of financial stability may require that the Federal Reserve have the authority to provide liquidity to restart or encourage markets to operate, thereby providing liquidity needed to allow households, small businesses, depositors and others access to working liquid markets. The need for such authority was fully evident during the financial crisis, when preventing a financial catastrophe required that the Federal Reserve provide liquidity to money market mutual funds, primary dealers, the commercial paper market, and the market for student loans, credit card loans, small business loans and the commercial real estate market.

Q.1.b. Do you believe that modifications to Section 13(3) of the Federal Reserve Act would be useful in clarifying emergency responses of various branches of government to financial crises? If so, what modifications do you believe would be most useful?

A.1.b. Apart from a possible elimination of the authority to lend to single firms (as discussed above), I do not believe that significant modifications to section 13(3) are necessary or appropriate. The Federal Reserve has historically been extremely cautious in using the section 13(3) authority.

Prior to the recent financial crisis, the Federal Reserve had authorized the extension of credit under section 13(3) in only one circumstance since the Great Depression and had not in fact extended credit under this section since the 1930s.

During this financial crisis, the Federal Reserve worked closely with the Department of the Treasury before exercising authority under section 13(3). We believe this consultation is important and appropriate and would not object to a statutory provision requiring consultation with or approval by the Secretary of the Treasury prior to authorizing an extension of credit under section 13(3).

Q.1.c. Do you favor the establishment of a new Fed-Treasury Accord to provide greater distinction between fiscal policy actions and lender-of-last resort actions taken by the Federal Reserve in an emergency?

A.1.c. The Federal Reserve and the Treasury have an accord that sets forth the principles applied by each in addressing the current crisis. We would favor a legislative provision allowing the Federal Reserve to transfer to the Treasury obligations that, while acquired in the course of Federal Reserve action as the lender of last resort, become fiscal obligations more appropriately managed by the Treasury Department. We would be happy to work with you on developing this type of approach.

Interest on Reserves

Q.2. Congress provided the authority to pay interest on reserves to the Board of Governors of the Federal Reserve, and not the Federal Open Market Committee (FOMC). Similarly, the Board of Governors, and not the FOMC, has authority over setting the discount rate and reserve requirements. According to minutes of the January 26–27, 2010, FOMC meeting, the interest rate paid on excess reserve balances (the IOER rate) is one of the tools available to support a gradual return to a more normal monetary policy stance. Quoting from the minutes:

> Participants expressed a range of views about the tools and strategy for removing policy accommodation when that step becomes appropriate. All agreed that raising the IOER rate and the target for the Federal funds rate would be a key element of a move to less accommodative monetary policy.

- Are there any possible future conflicts or difficulties that you could imagine might arise from having the Federal Reserve's target for the Federal funds rate determined by the FOMC while the IOER and discount rate are determined by the Board of Governors?
- As it moves toward a more normal monetary policy stance, the Federal Reserve may use the IOER rate to help manage reserve balances. If the IOER rate, rather than a target for a market rate, becomes an indicator of the stance of monetary policy for a time, will the balance of power over monetary policy between the FOMC and the Federal Reserve Board change?

A.2. As you know, the Congress has assigned to the Board the responsibility for determining the rate paid on reserves. Although the Federal Open Market Committee (FOMC) by law is responsible for directing open market operations, the Congress has also assigned to the Board the responsibility for determining certain other important terms that are relevant for the conduct of monetary policy—for example, the Board "reviews and determines" the discount rates that are established by the Federal Reserve Banks; the Federal Open Market Committee has no statutory role in setting the discount rate. Similarly, the Board sets reserve requirements subject to the constraints established by the Congress; the Federal Open Market Committee has no statutory role in setting reserve requirements.

For many years, the Board and the FOMC have worked collegially and cooperatively in setting the discount rate, the Federal funds target rate, and other instruments of monetary policy. I am convinced that the Board and the FOMC will continue to work cooperatively in the future in adjusting all of the instruments of monetary policy.

Monetary Policy and Fiscal Policy Distinction

Q.3.a. Several regional Federal Reserve bank presidents have expressed concern that actions taken by the Fed, many under Section 13(3) authority, were actions to channel credit to specific firms or specific segments of financial markets and the economy. The concern is that some actions amounted to fiscal, and not lender of last resort, policies. Moreover, in a March 23, 2009 joint press release, the Fed and the Treasury stated the following:

> *The Federal Reserve to avoid credit risk and credit allocation*
>
> The Federal Reserve's lender-of-last-resort responsibilities involve lending against collateral, secured to the satisfaction of the responsible Federal Reserve Bank. Actions taken by the Federal Reserve should also aim to improve financial or credit conditions broadly, not to allocate credit to narrowly defined sectors or classes of borrowers. Government decisions to influence the allocation of credit are the province of the fiscal authorities.

In accord with the joint statement, should the Fed's stock of agency debt and mortgage-backed securities along with its Maiden Lane holdings be swapped for Treasury securities, thereby transparently placing the channeling of credit support to the housing sector firmly in the hands of fiscal authorities?

A.3.a. The Federal Reserve's purchases of agency debt and mortgage-backed securities, and the credit it has extended to the Maiden Lane entities, arose for different reasons and deserve different treatment.

The primary purpose of the Federal Reserve's purchases of securities issued or guaranteed by Federal agencies was a monetary policy response intended to support the overall economy by providing support to the mortgage and housing sectors. The Federal Reserve believes that in routine circumstances the modes of government support for the housing sector should be determined by the Congress and carried out through agencies other than the Federal Reserve.

For that reason, the Federal Reserve in recent decades minimized its participation in the agency securities markets. However, the highly strained financial market conditions of the past few years prevented the Federal Reserve's monetary policy actions to lower interest rates from being fully transmitted to housing markets, as would have happened in more normal times, and the Federal Reserve's ability to lower short-term interest rates further was constrained after short-term rates were lowered to essentially zero.

In the circumstances, the Federal Reserve initiated a program to purchase agency debt and mortgage-backed securities.

The credit extensions to AIG and the Maiden Lane entities represent exercise of the Federal Reserve's authority as lender of last resort. The Treasury Department is better suited to make the policy and management decisions that attend the longer term relationship with a nonbanking firm that requires government assistance. Accordingly, the Federal Reserve would support a transfer to the Treasury of its AIG and Maiden Lane credits. The issues regarding a possible swap of agency debt and MBS securities for Treasury securities are somewhat more complex and would require careful study.

Q.3.b. The Fed has purchased over $1 trillion of agency mortgage-backed-securities and intends to complete purchases of $1.25 trillion of those securities by the end of March. To help finance those purchases, the Fed uses supplemental borrowing from the Treasury and issues interest-bearing reserve balances. In effect, the Fed is borrowing from the public, including banks, with promises to repay the borrowed sums plus interest. The Fed will continue that borrowing in order to hold on to its mortgage-backed securities until those assets gradually decline as they mature or are prepaid or sold. When the Fed effectively finances an enormous portfolio holding of a specific class of assets using interest bearing debt issued to the public, how is that not a fiscal policy exercise?

A.3.b. Monetary policy and fiscal policy are different tools that both can be used to stimulate the economy. The purpose of the Federal Reserve's large-scale asset purchases was primarily to apply macroeconomic stimulus by lowering longer-term interest rates and by improving financial market functioning; fiscal policy applies stimulus by adjusting overall government spending or revenues. Because the Federal Reserve's large-scale asset purchases involved changes in the central bank's balance sheet—and, in particular, the creation of a large volume of reserves, it is clear that the purchases were a monetary policy action. Moreover, the Federal Reserve's decision to purchase a large volume of longer-term assets in the crisis was consistent with its statutory mandate to promote maximum employment and price stability, and it was clearly supported by its statutory authorities. These transactions can and will be unwound in a manner consistent with these same mandates.

Systemic Risk Regulation

Q.4.a. Your February 25, 2010, testimony identifies that the Fed is making fundamental changes in its supervision of bank holding companies to, in your words, "incorporate a macroprudential perspective that goes beyond the traditional focus on safety and soundness of individual institutions."

Could you precisely define what you mean by a "macroprudential perspective," and what metrics guide that perspective?

A.4.a. Our supervisory approach should better reflect our mission, as a central bank, to promote financial stability. As was evident in the financial crisis, complex, global financial firms can be profoundly interconnected in ways that can threaten the viability of individual firms, the functioning of key financial markets, and the stability of the broader economy. A macroprudential perspective requires a more system-wide approach to the supervision of systemically critical firms that considers the interdependencies among firms and markets that have the potential to undermine the stability of the financial system. To that end, we have supported the creation of a council of regulators that would gather information from across the financial system, identify and assess potential risks to the financial system, and work with member agencies to address those risks.

In our own supervisory efforts, we are reorienting our approach to some of the largest holding companies to better anticipate and mitigate systemic risks. For example, we expect to increase the use of horizontal reviews, which focus on particular risks or activities across a group of banking organizations. In doing so, we have drawn on our experience with the Supervisory Capital Assessment Program (SCAP), in which the Federal Reserve led a coordinated effort by the bank supervisors to evaluate on a consistent basis the capital needs of the largest banking institutions in an adverse economic scenario. Because the SCAP involved the simultaneous evaluation of potential credit exposures across all of the included firms, we were better able to consider the systemic implications of financial stress under an adverse economic scenario, in addition to the impact of an adverse scenario on individual firms.

The SCAP also showed the benefits of drawing on the work of a wide range of staff—including supervisors, economists, and market and payments system experts—to comprehensively evaluate the risks facing financial firms. Going forward, the Federal Reserve is instituting a data-driven, quantitative surveillance mechanism that will draw on a similar range of staff expertise to provide an independent view of the risks facing large banking firms. As part of that effort, we are developing quantitative tools to help identify vulnerabilities at both the firm level and for the aggregate financial sector. We anticipate that these tools will incorporate macroeconomic forecasts, including spillover and feedback effects. We also expect to develop indicators of interconnectedness, which could encompass common credit, market, and funding exposures. The development of specific metrics will also depend, in part, on the availability of timely and comparable data from systemically important firms.

Q.4.b. Does the Fed intend to redefine what regulators should regard as "safety and soundness?"

A.4.b. Ensuring the safety and soundness of institutions has been a cornerstone of the Federal Reserve's supervision program. The recent crisis has shown that large, interconnected firms can be buffeted by a market-driven crisis, magnifying weaknesses in risk management practices, and revealing capital and liquidity buffers calibrated to withstand institution-specific stress events to be insufficient. For this reason, leading supervisors in the United States and abroad are reviewing the prudential standards needed to ensure safety and soundness for individual firms and the financial system as a whole. The Federal Reserve is participating in a range of joint efforts to ensure that large, systemically critical financial institutions hold more and higher quality capital, improve their risk-management practices, have more robust liquidity management, employ compensation structures that provide appropriate performance and risk-taking incentives, and deal fairly with consumers.

We are working with our domestic and international counterparts to develop capital and prudential requirements that take account of the systemic importance of large, complex firms whose failure would pose a significant threat to overall financial stability. Options under consideration include assessing a capital surcharge on these institutions or requiring that a greater share of their capital be in the form of common equity. For additional protection, systemically important institutions could be required to issue contingent capital, such as debt-like securities that convert to common equity in times of macroeconomic stress or when losses erode the institution's capital base. U.S. supervisory agencies have already increased capital requirements for trading activities and securitization exposures, two of the areas in which losses were especially high.

Liquidity requirements should also be strengthened for systemically critical firms, as even solvent financial institutions can be brought down by liquidity problems. The bank regulatory agencies are implementing strengthened guidance on liquidity risk management and weighing proposals for quantitatively based requirements. In addition to insufficient capital and inadequate liquidity risk management, flawed compensation practices at financial institutions also contributed to the crisis. Compensation should appropriately link pay to performance and provide sound incentives. The Federal Reserve has issued proposed guidance that would require banking organizations to review their compensation practices to ensure they do not encourage excessive risk-taking, are subject to effective controls and risk management, and are supported by strong corporate governance including board-level oversight.

Federal Reserve's Asset Holdings

Q.5. Charles Plosser, President of the Federal Reserve Bank of Philadelphia, stated in a recent speech that

> . . . the Fed could help preserve its independence by limiting the scope of its ability to engage in activities that blur the boundary lines between monetary and fiscal policy. Thus, as the economic recovery gains strength and monetary policy begins to normalize, I would favor our beginning to sell some of the agency mortgage-backed securities from our portfolio rather than relying only on redemptions of these assets. Doing so would help extricate the Fed from the realm of fiscal policy and housing finance.

Do you agree with President Plosser?

A.5. I provided my views on asset sales in my March 25, 2010, testimony before the House Committee on Financial Services. The relevant passage is reproduced below.

When these tools [reverse repurchase agreements and term deposits] are used to drain reserves from the banking system, they do so by replacing bank reserves with other liabilities; the asset side and the overall of the Federal Reserve's balance sheet remain unchanged. If necessary, as a means of applying monetary restraint, the Federal Reserve also has the option of redeeming or selling securities. The redemption or sale of securities would have the effect of reducing the size of the Federal Reserve's balance sheet as well as further reducing the quantity of reserves in the banking system. Restoring the size and composition of the balance sheet to a more normal configuration is a longer-term objective of our policies. In any case, the sequencing of steps and the combination of tools that the Federal Reserve uses as it exits from its currently very accommodative policy stance will depend on economic and financial developments and on our best judgments about how to meet the Federal Reserve's dual mandate of maximum employment and price stability.

Treasury Financing Account at the Fed

Q.6. On February 23, 2010, the Treasury announced, rather suddenly and surprisingly, and without much explanation, that it anticipates increasing its Supplementary Financing Account at the Fed by around $200 billion over the next 2 months. This means, essentially, that the Treasury will borrow on behalf of the Fed and simply hold the funds in the Treasury's account at the Fed. I understand that the Treasury's Supplementary Financing Program helps the Fed absorb reserves from the banking system and manage its balance sheet. I wonder, however, about the lack of information concerning why the Treasury suddenly decided to increase its balance at the Fed.

- Was the Treasury's February 23 announcement planned in advance and coordinated with the Fed, or was it a surprise to the Fed?
- What are the future plans for the size of the Treasury's Supplemental Financing Account?
- Who will decide what will be the future balances in the Supplemental Financing Account?

A.6. The Treasury and the Federal Reserve consulted closely on the Treasury's February 23 announcement regarding the Supplementary Financing Program. However, the Treasury makes all decisions on balances to be held in the Supplementary Financing Account.

Efforts to Toughen Capital and Liquidity Requirements

Q.7.a. Your testimony on February 25, 2010 identifies that

> . . . the Federal Reserve has been playing a key international role in international efforts to toughen capital and liquidity requirements for financial institutions, particularly systemically critical firms . . .

Could you describe what those efforts have been?

A.7.a. The Federal Reserve has an active leadership role within the Finance Stability Board, the Basel Committee for Banking Supervision, and various other international supervisory fora. Through these fora, especially the Basel Committee, the Federal Reserve has worked diligently with supervisors from around the world to develop a comprehensive series of reforms to address the lessons that we have learned from the recent global financial crisis. The goal of the Basel Committee's reform package is to improve the international banking sector's ability to deal with future economic and financial stress, thus reducing the contagion risk from the financial sector to the real economy.

The Federal Reserve co-chairs three Basel Committee working groups that are focusing on reforms especially pertinent to systemically important institutions. These groups are developing: a) revisions to the capital regulations for trading book activities, designed to enhance risk measurement and to significantly increase the capital requirement associated with various financial instruments that contributed to losses at systemically important institutions during the crisis; b) enhanced and higher capital charges for counterparty credit risk, including a new charge for credit valuation allowances (CVA), which were a significant source of loss during the crisis; and c) new liquidity standards, which directly address a major challenge during the global turmoil. With regard to the latter, the proposed standards draw heavily from conceptual design work contributed by Federal Reserve staff. In addition, Federal Reserve staff made significant contributions to the Basel Committee's Principles for Sound Liquidity Risk Management and supervision issued in September 2008. In many cases, the international principles articulated drew heavily from established Federal Reserve guidance. Moreover, Federal Reserve economists and supervisors have been heavily involved in work conducted by the Basel Committee and by the Committee of Global Financial Stability to develop forward-looking measures of systemic liquidity risks and in assessing the current state of funding and liquidity risk management at internationally active financial institutions.

Federal Reserve staff also are key players in the Basel Committee's working groups developing a new international leverage ratio standard, which is largely inspired by the U.S. leverage standard, and a new definition of regulatory capital for banking organizations, which is an area where the Federal Reserve provides insightful experience since almost all banking capital issuance in the U.S. is executed at the bank holding company level.[1] Moreover, the Federal Reserve has also played an active role in the Basel Committee's working group that recently issued recommendations to strengthen the resolution of systemically significant cross-border banks.[2]

Q.7.b. Could you define a "systemically critical" firm and identify how many such firms currently operate in the United States?

A.7.b. A "systemically critical" firm is one whose failure would have significant adverse effects on financial markets or the economy. At any point in time, the systemic importance of an individual firm depends on a wide range of factors including whether the firm has extensive on- and off-balance sheet activities, whether the firm is interconnected—either receiving funding from, or providing funding to other systemically important firms—whether the firm plays a major role in key financial markets, and/or whether the firm provides crucial services to its customers that cannot easily or quickly be provided by other financial institutions. That said, the identification of systemic importance requires considerable judgment because each stress event is different, because market structure, business practices, financial products, technologies, supervisory

[1] See "Strengthening the resilience of the banking sector-consultative document" (December 2009), available at *www.bis.org/publ/bcbs164.htm*.

[2] See "Report and recommendations of the Cross-border Bank Resolution Group-final paper" (March 2009), available at *www.bis.org/publ/bcbs169.htm*.

practices and regulatory environments evolve over time. This evolution, of course, changes the interconnections between firms, their relative sizes, their functions and services, and the extent to which services can be obtained from other firms or in financial markets. As a practical matter, it is likely that the number of firms that are considered systemically critical will be less than 50. For example, only about 35 U.S. financial firms, with publicly traded stock outstanding, have total assets over $100 billion as of 2008:Q4.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR BROWN FROM BEN S. BERNANKE

Bank Lending

Q.1. I have heard from Ohio banks that banking regulators are preventing them from expanding commercial lending by requiring them to maintain greater capital reserves. I agree that we need to ensure that our banks are well capitalized, but at some point we've got to get lending going again, particularly to businesses that will use their money to hire workers.

How can banks strike a balance between being well capitalized and still lending like they are supposed to?

A.1. The loss absorbing characteristics of capital provide the economic bedrock that supports prudent bank lending and, as such, it is not inconsistent for banks to remain well capitalized and concomitantly engage in healthy lending practices. However, during the financial crisis, many banks recorded significant financial losses that eroded their capital base and as a result, some banks may be operating with reduced capital bases to support lending activities. In other instances, well capitalized banks may be reluctant to lend if their outlook on economic conditions lead them to believe that additional losses are likely in the near term, which would further erode their current capital position. The Federal Reserve believes that, in cases where banks are concerned about potential additional losses, a prudent response would be for those banks to increase their capital position in order to address this concern and to take advantage of any demand in commercial lending. Likewise, we believe that an improving economic outlook should help banks to bolster their capital levels and contribute to increased willingness of banks to lend.

Q.2. Have you considered taking any specific steps, like lowering the Fed's interest payments on excess bank reserves, or perhaps even imposing a penalty on hoarding money, to promote greater lending?

A.2. The Federal Reserve's payment of interest on excess reserves is unlikely to be a significant factor in banks' current reluctance to lend. The Federal Reserve is currently paying interest at a rate of only one quarter of 1 percent on banks' reserve balances. By contrast, the prime rate is currently at 3 ¼ percent, and many bank lending rates are considerably higher than the prime rate. Given the large difference between the interest rate paid on excess reserves and the interest rates on banks, the ability to earn interest on excess reserves is unlikely to be an important reason for the tightening of banks' lending standards and terms over the past few years. Indeed, survey results suggest that the major reason that banks have tightened lending terms and standards over the past 2 years or so was their concern about the economic outlook. As you know, the Federal Reserve has acted aggressively from the outset of the financial crisis to stabilize financial market conditions and promote sustainable economic growth. An improving economic outlook should contribute to increased willingness of banks to lend.

Bank Concentration

Q.3. Banks are borrowing at record low interest rates—particularly those banks that are viewed as "too big to fail." According to the Center for Economic and Policy Research, the 18 biggest banks are getting what amounts to a $34.1 billion a year subsidy because of their implicit government guarantee. More recent data from the FDIC shows that big banks are turning a profit, but small banks are not. Data from 1999 shows that large banks' fees for overdrafts are 41 percent higher than at small banks and bounced check fees are 43 percent higher. Now borrowers are having their lines of credit slashed and their bank fees are still increasing.

So it appears that consumers and small banks are suffering, while the big banks thrive. And the market is only getting more concentrated: 319 banks were forced to merge or fail in 2009.

What steps are the Fed taking to ensure that there is not excessive concentration in the banking industry, and that consumers are being well served through meaningful competition?

A.3. The Riegle-Neal Interstate Banking and Branching Efficiency Act (IBBEA) of 1994 provides prudential protection against excessive concentration in the banking industry by prohibiting the Federal Reserve from approving a bank acquisition that would result in a bank holding company exceeding a nationwide deposit concentration limitation of more than 10 percent of the total amount of deposits of insured depository institutions in the United States.

Notwithstanding that protection, there are many other potential methods to address the subsidies that may arise because of perceptions that large financial firms are "too-big-to-fail." For example, firms that might reasonably be considered "too-big-to-fail" may be subject to higher capital (and liquidity) requirements, more highly tailored resolution mechanisms, tighter deposit share caps, required issuance of contingent capital instruments and/or subordinated debt instruments, limitations on, or a ban of, certain activities (*e.g.,* hedge funds or private equity funds), and taxes on nondeposit balance-sheet liabilities. As the financial crisis winds down, many of these types of proposals to reduce the subsidies that arise from implicit guarantees are under consideration in the United States and abroad. In fact, Federal Reserve staff are participating on many international working groups that are considering the potential effects, including unintended consequences, that may arise from implementing such proposals either singularly, or in combination. A key factor in such analyses is the impact on competition here in the United States and internationally across borders.

Research on whether consumers benefit from "too-big-to-fail" subsidies is scant. It is plausible that large financial institutions might pass along some of their subsidies to consumers to fuel their own growth at the expense of smaller peers. Some evidence, however, suggests otherwise. For example, Passmore, Burgess, Hancock, Lehnert, and Sherlund (in a presentation at the Federal Reserve Bank of Chicago Bank Structure Conference, May 18, 2006) estimate that just 5 percent of the Fannie Mae and Freddie Mac's borrowing advantage flowed through to mortgage rates, resulting in just a few basis points reduction in conforming mortgage loan rates. Even if financial firms do not pass along their "too-big-to-fail" subsidies to consumers, it does not necessarily imply that they cannot pass along the higher costs that would result from the reduction of such subsidies. Indeed, larger firms may set the market prices for some financial products because of other cost advantages associated with their size. In such circumstances, consumers may end up paying higher prices when "too-big-to-fail" subsidies are reduced (or eliminated) even though they did not previously much benefit from such subsidies. That said, all consumers benefit from a more stable financial system with less systemic risk and this is the goal of reducing or eliminating "too-big-to-fail" subsidies.

Resolution of Failed Banks

Q.4. You have previously said that you favor "establishing a process that would allow a failing, systemically important non-bank financial institution to be wound down in any orderly fashion, without jeopardizing financial stability." There's been a lot of talk about whether this job should be done by banking regulators or a bankruptcy court.

Do you have an opinion about this, particularly whether the FDIC is doing a good job with its resolution authority?

A.4. In most cases, the Federal bankruptcy laws provide an appropriate framework for the resolution of nonbank financial institutions. However, the bankruptcy code does not sufficiently protect the public's strong interest in ensuring the orderly resolution of a nonbank financial firm whose failure would pose substantial risks to the financial system and to the economy.

A new resolution regime for systemically important nonbank financial firms, analogous to the regime currently used by the Federal Deposit Insurance Corporation for banks, would provide the government the tools to restructure or wind down such a firm in a way that mitigates the risks to financial stability and the economy and thus protects the public interest. It also would provide the government a mechanism for imposing losses on the shareholders and creditors of the firm. Establishing credible processes for imposing such losses is essential to restoring a meaningful degree of market discipline and addressing the "too-big-to-fail" problem.

It would be appropriate to establish a high standard for invocation of this new resolution regime and to create checks and balances on its potential use, similar to the provisions governing use of the systemic risk exception to least-cost resolution in the Federal Deposit Insurance Act (FDI Act). The Federal Reserve's participation in this decisionmaking process would be an extension of our long-standing role in protecting financial stability, involvement in the current process for invoking the systemic risk exception under the FDI Act, and status as consolidated supervisor for large banking organizations. The Federal Reserve, however, is not well suited, nor do we seek, to serve as the resolution agency for systemically important institutions under a new framework. Because the suitability of an entity to serve as the resolution agency for any particular firm may depend on the firm's structure and activities, the Treasury Department should be given flexibility to appoint a receiver that has the requisite expertise to address the issues presented by a wind down of that firm.

Banks Trading Commodities Futures Derivatives

Q.5. You gave an address at Harvard in 2008 in which you talked about out-of-control crude oil prices. You said that "demand growth and constrained supplies" were responsible for "intense pressure on [gas] prices." Senator Carl Levin investigated the crude oil market and found that speculation "appears to have altered the historical relationship between [crude oil] price and inventory." In 2003, at the request of Citigroup and UBS, the Fed authorized bank holding companies to trade energy futures, both on exchanges and over-the-counter.

Given that commodity prices affect the Consumer Price Index, which affects inflation, have you investigated what effect the rule change, and the resulting investments in commodities futures and other commodities-related derivatives, have had on oil prices?

Q.6. If not, how can you conclude that rises in gasoline prices are due solely to simple changes in supply and demand?

Q.7. If presented with evidence that energy speculation was driving up prices or affecting inflation, would you consider revoking the banks' authority to trade energy futures?

A5.–7. The broad movements in oil and other commodity prices have been in line with developments in the global economy. They rose when global growth was strong and supply was constrained. and they collapsed with the onset of the global recession. As the global economy began to recover and financial conditions began to normalize, commodity prices rebounded.

Nonetheless, the extreme price swings, particularly in the case of oil, have been surprising. Some have argued that speculative activities on the part of financial investors have been responsible for these outsized price movements. Notwithstanding considerable study, however, conclusive evidence of the role of speculators and financial investors remains elusive. The fundamentals of supply and demand, along with expectations for how these fundamentals will evolve in the future, remain the best explanation for the movements in commodity prices. That said, we must remain open to other possibilities, and if conclusive evidence emerged that commodity markets were not performing their price discovery and allocative role effectively, then changes in regulatory policies may be appropriate.

Fed Purchases of Foreign Currency Derivatives

Q.8. In the wake of the Greek debt crisis, I'm concerned about governments' use of foreign currency exchanges—that other governments might be using foreign currency swaps to mask their debt, or for other purposes. We know that the Federal Reserve entered into swaps with Foreign Central Banks and then those Foreign

Central Banks bailed out their own banking systems. For example, the Federal Reserve worked with the Swiss central bank on the rescue effort for UBS, securing dollars through a swap agreement for francs. As of December 31, 2008, the United States had entered into $550 billion in liquidity swaps with foreign central banks.

How are these arrangements between the Federal Reserve and the other central banks structured?

A.8. The dollar liquidity swap arrangements that the Federal Reserve entered into with foreign central banks were fundamentally different from the currency swaps that have been discussed in the Greek context. According to reports, the Greek cross-currency swaps were highly structured arrangements initiated 8 or 9 years ago between the government of Greece and a private sector financial institution. These swaps apparently entailed payment obligations over a period of 15 to 20 years with large balloon payments at maturity, and they allowed the Greek government to exchange into euros the proceeds of borrowing it had done in Japanese yen and U.S. dollars at off-market rates of exchange.

The dollar liquidity swaps, the volume of which is now zero following the termination of the arrangements in February, were more straightforward, shorter-term arrangements with foreign central banks of the highest credit standing. In each dollar liquidity swap transaction, the Federal Reserve provided U.S. dollars to a foreign central bank in exchange for an equivalent amount of funds in the currency of the foreign central bank, based on the market exchange rate at the time of the transaction. The parties agreed to swap back these quantities of their two currencies at a specified date in the future, which was at most 3 months ahead, using the same exchange rate as in the initial exchange. The Federal Reserve also received interest corresponding to the maturity of the swap drawing.

Because the terms of each swap transaction were set in advance, fluctuations in exchange rates following the initial exchange did not alter the eventual payments. Accordingly, these swap operations carried no exchange rate or other market risks. In addition, we judged our swap line exposures to be of the highest quality and safety. The foreign currency held by the Federal Reserve during the term of the swap provided an important safeguard. Furthermore, our exposures were not to the institutions ultimately receiving the dollar liquidity in the foreign countries but to the foreign central banks. We have had long and close relationships with these central banks, many of which hold substantial quantities of U.S. dollar reserves in accounts at the Federal Reserve Bank ofNew York, and these dealings provided a track record that justified a high degree of trust and cooperation. The short tenor of the swaps, which ranged from overnight to 3 months at most, also offered some protection, in that positions could be wound down relatively quickly were it judged appropriate to do so.

Q.9. Are these swaps being used in any way to mask U.S. Government debt?

A.9. No. These swaps were limited to the exchange of U.S. dollar liquidity for foreign-currency liquidity and were not used in any way to mask U.S. Government debt.

Q.10. Does the Federal Reserve keep track of which foreign banks ultimately receive U.S. money from foreign central banks? If so, what banks have gotten U.S. money, and how much has each gotten?

A.10. The Federal Reserve's contractual relationships were with the foreign central banks and not with the financial institutions ultimately obtaining the dollar funding provided by these operations. Accordingly, the Federal Reserve did not track the names of the institutions receiving the dollar liquidity from the foreign central banks but instead left to the foreign central banks the responsibility for managing the distribution of the dollar funding. This responsibility included determining the eligibility of institutions that could participate in the dollar lending operations, assessing the acceptability of the collateral offered, and bearing any residual credit risk that might have arisen as a result of the lending operations.

Q.11. Is the U.S. Treasury issuing Treasury bonds which the Fed is then buying through the U.K. or other foreign governments?

A.11. No.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR MERKLEY FROM BEN S. BERNANKE

Q.1. The homeownership rate in Canada is almost identical to that of the United States. Yet the percentage of U.S. mortgages in arrears is fast approaching 10 percent while the percentage of Canadian mortgages in arrears has been relatively stable for the past two decades at less than 1 percent. What characteristics of the mortgage market in Canada do you believe have helped that country avoid a similar foreclosure crisis?

A.1. A number of characteristics of the Canadian mortgage market helped Canada avoid a foreclosure crisis. Canadian homeowners typically maintain greater equity in their homes, in part because mortgage insurance, which is required when loan-to-value ratios exceed 80 percent, is more costly than in the United States. Moreover, Canadian mortgages are subject to substantial pre-payment penalties, reducing the incentives of households to regularly refinance their mortgages. While in general this limits households' ability to take advantage of falling interest rates, it also reduces the number of "cash out" refinancings, increasing the average equity held by households.

In addition, a greater fraction of Canadian mortgages are prime mortgages, which default at lower rates than sub-prime mortgages. One reason the sub-prime market was slower to grow in Canada is because of the incentives, noted above, for borrowers to make higher down payments. Another reason is that a smaller fraction of mortgages in Canada are securitized, because even mortgages that have been securitized and resold carry a capital charge, giving Canadian banks less incentive to securitize mortgages. A mortgage lender that plans to hold a mortgage to maturity likely employs higher underwriting standards than a mortgage lender that plans to securitize the loan.

Finally, Canada has experienced a comparatively milder labor-market downturn than the United States and only a modest decline in house prices. These factors, too, have helped reduce the incidence of default.

Q.2. All of the six major banks in Canada own investment banking and insurance subsidiaries. All five of the major banks in Canada would probably be considered "too-big-to-fail." However, the Canadian banking regulators have prudently enforced more stringent capital requirements including a 7 percent minimum of Tier 1 capital and 10 percent minimum of total capital. Additionally, there is an Assets-to-Capital Multiple maximum of 20 (or leverage ratio).

What lessons have you learned from observing the actions that Canadian regulators have taken regarding the use of more stringent capital requirements than those required under Basel II?

A.2. At present, the U.S. regulatory capital rules result in a requirement for banking organizations to hold capital at levels that are equal to, or exceed, Canadian peers; notwithstanding that the stated required minimum Tier 1 risk-based capital ratio is 6 percent for "well capitalized" banks under PCA.[1] Because of statutorily required responses to the breeching of a PCA capital threshold, market forces generally necessitate banks and bank holding companies to hold substantially more capital than the "well capitalized" ratio requirements to ensure that significant losses can be absorbed before a "well capitalized" ratio is breached. The following table outlines the Tier I, Total and Leverage ratios of the top six U.S. bank holding companies and provides our estimate of their respective Assets-to-Capital Multiple as computed under the Canadian regulatory capital regime. As shown below, each of the top six U.S. bank holding companies would easily exceed the Canadian standards outlined above.

Selected Capital Ratios
Six Largest U.S. Bank Holding Companies
(as of December 31, 2009)

	Tier 1 Risk-Based Capital	Total Risk-Based Capital	Tier 1 Leverage Ratio	Assets-to-Tier 1 Capital Multiple (Inverse of U.S. Leverage Ratio)	Assets-to-Capital Multiple (Canadian Definition)
Bank of America	10.41%	14.67%	6.91%	14.5	11.6
JP Morgan Chase	11.10%	14.78%	6.88%	14.5	13.7
Citigroup	11.67%	15.25%	6.89%	14.5	12.7
Wells Fargo	9.25%	13.26%	7.87%	12.7	9.6
Goldman Sachs	14.97%	18.17%	7.55%	13.2	12.3
Morgan Stanley	15.30%	16.38%	5.80%	17.2	17.1

The Federal Reserve believes that, going forward, capital requirements will need to be recalibrated to directly address the inappropriate incentives that were the underlying causes of the financial crisis. We are engaged in a significant effort both here in the United States and abroad to achieve this objective.

Q.3. Canada has an independent consumer protection agency, called the Consumer Financial Agency of Canada. Do you believe

[1] To be considered "well capitalized" under the U.S. Prompt Corrective Action (PCA) requirements, a bank must have a Tier 1 Leverage ratio of no less than 5 percent, a Tier I risk-based capital ratio of no less than 6 percent, a Total risk-based capital ratio of no less than 10 percent.

that this agency's mission and independence has helped the Canadian financial markets remain stable and well capitalized, even under the current economic conditions?

A.3. Consumer protection laws are very important for maintaining a well-functioning financial system. The Financial Consumer Agency of Canada (FCAC) is responsible for ensuring compliance with consumer protection laws and regulations; monitoring financial institutions' compliance with voluntary codes of conduct; and informing consumers of their rights and responsibilities as well as providing general information on financial products.

Ensuring compliance with consumer protection laws is an important defense against future financial problems, and informed consumers are undoubtedly less likely to enter unfavorable mortgage agreements. It is difficult to gauge, however, the extent to which the quality of consumer information and extent of consumer protection help explain why Canada had relatively few of the exotic, hard-to-understand sub-prime mortgages that have had such high default rates in the United States. As noted in the answer to the preceding question, other factors—the structure of the mortgage market and bank capital regulation in Canada—appear to represent more tangible reasons why the sub-prime market was slow to develop in Canada.

Q.4. Throughout the past year, many witnesses before the Senate Banking Committee have argued that the widespread practice of securitizing mortgages helped propagate bad underwriting practices and contributed to the toxic nature of many, if not all, investments in subprime mortgages. The Canadian mortgage market only has approximately 5 percent of outstanding mortgages categorized as "subprime." Additionally, according to the Bank of Canada, 68 percent of mortgages remain on the balance sheet of the lender and most residential mortgage financing is funded through deposits. Do you think that banks who keep major portions of their residential real estate lending "on the books" are less likely to engage in the financing of, "subprime" mortgage lending?

A.4. It is unlikely that a requirement to keep mortgage exposures on balance sheet would make banking organizations less likely to underwrite "subprime" exposures. For instance, prior to the financial crisis, many banking organizations entered into "subprime" mortgage securitizations and retained the "first loss" positions "on the books," reflecting a high risk tolerance for exposure to the "subprime" mortgage market. Additionally, many other banking organizations provided recourse on "subprime" mortgage exposures that they sold to securitization structures; again, a reflections of a high risk tolerance "subprime" mortgage exposures. If banking organizations were no longer allowed to place "subprime" mortgages into securitization vehicles, it could be reasonably posited that banking organizations would continue to underwrite "subprime" mortgages given the higher yield earned from these exposures and the fact that the current risk-based capital framework levies an identical capital requirement for a "subprime" exposure as it does for a "prime" exposure.

There are several distinct differences between the U.S. and Canadian mortgage markets that raise difficulty in using the Canadian experience as a comparator. For example, the Canada Mortgage and Housing Corporation (CMHC), which serves a similar function as Freddie and Fannie, is guaranteed by the full faith and credit of Canada, in the same manner as GNMA is guaranteed by the United States. As a result, banking organizations that invest in securitization structures through the CMHC are required to hold no regulatory capital against their investment (0 percent risk-weight exposure), versus in the United States where banking organizations must risk-weight exposures to Freddie or Fannie at 20 percent. In addition, Canadian banking organizations are required to obtain private mortgage insurance (PMI) for all mortgages with a loan-to-value ratio over 80 percent and they must maintain the PMI for the life of the loan, regardless of any subsequent reduction in a mortgage's LTV that may result from loan repayment or house appreciation. However, banks that rely on private mortgage insurers receive a government guarantee against losses that exceed 10 percent of the original mortgage in the event of an insurer failure. As a result, Canadian banking organizations are required to hold relatively little capital against mortgage exposures that are held on balance sheet—either through on-balance sheet mortgage portfolios or through investments in CMHC securitizations.

The market for "subprime" mortgages was all but ended for Canadian banking organizations in 2008 when the CMHC decided to no longer insure "subprime" mortgages. This provided a significant regulatory capital disincentive for Canadian banking organizations to underwrite "subprime" mortgages.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR BUNNING FROM BEN S. BERNANKE

Q.1. Treasury recently announced they were starting up the Supplemental Financing Program again. Under that Program, Treasury issues debt and deposits the cash with the Fed. That is effectively the same thing as the Fed issuing its own debt, which is not allowed. What are the legal grounds the Fed and Treasury use to justify that program? And did anyone in the Fed or Treasury raise objections when the program was created?

A.1. Section 15 of the Federal Reserve Act requires the Federal Reserve to act as fiscal agent for the United States and authorizes the Treasury to deposit money held in the general fund of the Treasury in the Federal Reserve Banks. Balances held by the Reserve Banks in the Treasury's Supplementary Financing Account (SFA) are deposited and held under this authority. Although the Treasury and the Federal Reserve have consulted closely on matters regarding the Supplemental Financing Program (SFP), the Treasury makes all decisions on balances to be held in the SFA.

I am not aware of any staff member or policymaker raising legal objections to the creation of the SFP. However, at least one Federal Reserve policymaker has publicly expressed policy concerns with the SFP. See Real Time Economics, WSJ Blogs, "Q&A: Philly Fed's Plosser Takes on 'Extended Period' Language," March 1, 2010.

Q.2. Given what you learned during the AIG crisis and bailout, do you think Congress should be doing something to address insurance regulation or the commercial paper market?

A.2. The financial crisis has made clear that all financial institutions that are so large and interconnected their failure could threaten the stability of the financial system and the economy must be subject to consolidated supervision. Lack of strong consolidated supervision of systemically critical firms not organized as bank holding companies, such as AIG, proved to be a serious regulatory gap. The Federal Reserve strongly supports ongoing efforts in the Congress to reform financial regulation and close existing gaps in the regulatory framework.

An effective framework for financial supervision and regulation also must address macroprudential risks—that is, risks to the financial system as a whole. The disruptions in the commercial paper market following the failure of Lehman Brothers on September 15, 2008 and the breaking of the buck by a large money fund the following day are examples of such macroprudential risks.

Legislative proposals in both the House and Senate would also improve the exchange of information and the cross-fertilization of ideas by creating an oversight council composed of representatives of the agencies and departments involved in the oversight of the financial sector that would be responsible for monitoring and identifying emerging systemic risks across the full range of financial institutions and markets. The council would have the ability to coordinate responses by member agencies to mitigate identified threats to financial stability and, importantly, would have the authority to recommend that its member agencies, either individually or collectively, adopt heightened prudential standards for the firms under the agencies' supervision in order to mitigate potential systemic risks.

Q.3.a. When did you know that AIG's swaps partners were going to be paid off at effectively par value in the Maiden Lane 3 transaction?

Q.3.b. Did you or the Board approve the payments?

A.3.a.–b. I was not directly involved in the negotiations with the counterparties that sold multi-sector collateralized debt obligations ("CDOs") to Maiden Lane III LLC ("ML III") in return for termination of credit default swaps AIG had written on those CDOs. These negotiations were handled by the staff of the Federal Reserve Bank of New York ("FRBNY"). I participated in and support the final action of the Board to authorize lending by the FRBNY to ML III for the purpose of purchasing the CDOs in order to remove an enormous obstacle to AIG's financial stability and thereby help prevent a disorderly failure of AIG during troubled economic times.

As explained in the testimony of Thomas Baxter, Executive Vice President and General Counsel, FRBNY, before the Committee on Oversight and Government Reform on January 27, 2010, the Federal Reserve loan to ML III was used by ML III to purchase the multi-sector CDOs underlying AIG's CDS at their current market value (approximately $29 billion), which represented a significant discount to their par value ($62 billion). Collateral already posted by AIG (not ML III) under the terms of the CDS contracts was also relinquished by AIG in return for tearing-up the contracts and freeing AIG of further obligations under the CDS contracts. Before agreeing to the transaction, the Federal Reserve consulted independent financial advisors to assess the value of the underlying CDOs and the expectation that the value of the CDOs would be recovered. The advisors believed that the cash flow and returns on the CDOs would be sufficient, even under highly stressed conditions, to fully repay the Federal Reserve's loan to ML III. Under the terms of the agreement negotiated with AIG, the Federal Reserve will also receive two-thirds of any profits received on the CDOs after the Federal Reserve's loan and AIG's subordinated equity position are repaid in full.

Q.3.c. When did you find out about the cover-up of the amount of the payments?

Q.3.d. Did you approve of the efforts to cover up the amount of the payments?

Q.3.e. If you did not approve of the cover-up at the time, do you believe that it was the right decision?

A.3.c.–e. The amount of the payments to the CDS counterparties was fully disclosed by AIG. Moreover, the Federal Reserve fully disclosed the amount of its loan to ML III and the fair value of the assets that serve as collateral for that loan in both the weekly balance sheet of the Federal Reserve (available on the Board's website) and in the Board's reports to Congress as required by law.

AIG was at all times responsible for complying with the disclosure requirements of the various securities laws. I was not involved in the discussions between the Federal Reserve and AIG related to AIG's securities law filings. I fully supported AIG's decision to release publicly in March 2009 the identities of these counterparties.

Q.4. The Fed has been out in the press talking about how they are going to make money on their AIG loans, making it sound like a good deal for the taxpayers. However, that is not the whole story because Treasury has committed some $70 billion to the AIG bailout. So the taxpayers are still exposed to AIG, and in fact are likely to take losses. Do you agree that the Fed's exposure to AIG is not the whole story and the taxpayers are likely to face losses from the AIG bailout?

A.4. As you know, the Federal Reserve provided liquidity to AIG through direct line of credit and through loans provided to two Maiden Lane facilities that funded certain assets of AIG. Extensive information about each of these credits is available on the Board's website and in reports and testimony provided by the Federal Reserve to Congress. Based on analysis of the collateral supporting these loans by experienced third-party advisors and the FRBNY, the Federal Reserve expects to be fully repaid on each of these credits, with no loss to the taxpayers.

The Treasury Department has provided equity to AIG. Like the liquidity provided by the Federal Reserve, this equity was provided in order to prevent the disorderly collapse of AIG during a period of extreme financial stress that could have caused significant economic distress for policy holders, municipalities, and small and large businesses, and led to even greater financial chaos and a far deeper economic slump than the very severe one we have experienced.

Q.5. Did you or the Board approve of then New York, Fed President Geithner staying on at the New York Fed while working for the Obama transition team? If yes, why did you think that was a good idea?

A.5. Timothy Geithner was appointed President of the Federal Reserve Bank of New York for a 5-year term that extended until February 28, 2011. When President Geithner was asked by the President-elect of the United States to serve as Secretary of the Treasury, President Geithner withdrew from the Bank's day-to-day management pending his confirmation by the Senate. He also relinquished his Federal Open Market Committee (FOMC) responsibilities which were assumed by Christine Cumming, the Reserve Bank's alternate representative elected in accordance with the Federal Reserve Act. President Geithner did not attend the December 2008 FOMC meeting. Ms. Cumming served as a voting member of the FOMC until President Geithner's successor took office. It was expected that President Geithner would continue to serve as President of the Reserve Bank at least through the end of his term if he did not become Secretary of the Treasury.

Q.6. Is the Fed now, or has the Fed in recent years, purchased Greek Government or bank debt?

A.6. The Federal Reserve has not purchased debt of the government of Greece nor has the Federal Reserve purchased the debt of any Greek financial institution. Detailed information on the Federal Reserve's foreign exchange holdings, both currency and investments, is available in the quarterly *Treasury and Federal Reserve Foreign Exchange Operations* report published by the Federal Reserve Bank of New York. See *http://www.newyorkfed.org/markets/quar_reports.html.*

Q.7. Unemployment numbers continue to bounce up and down every week. As this year goes on, the Census is going to be hiring 700,000 to 800,000 workers on a temporary basis. Are you worried those numbers will distort the true jobs picture, and that economic forecasts that use those jobs numbers will be wrong?

A.7. As you suggest, hiring of temporary workers by the U.S. Bureau of the Census in support of the decennial census will elevate the total payroll employment counts reported by the Bureau of Labor Statistics (BLS) each month because these temporary workers are included in Federal Government employment in the Current Employment Statistics (CES) survey. However, I do not think that Census hiring will make it much more difficult than usual to interpret the monthly employment reports. The BLS is publishing information each month on the number of temporary census workers in the CES data, and thus it will be straightforward to adjust the data to calculate the monthly changes in payroll employment excluding the effects of Census hiring; moreover, Census hiring will not distort the BLS estimates of employment change in the private sector. In addition, the Bureau of the Census has made available its hiring plans for coming months, which economic forecasters can use in making their projections of employment changes for the remainder of this year. Although these plans are subject to change, based on this information, the Department of Commerce expects the effect on the level of payroll employment reported by the BLS to peak at about 635,000 jobs in May 2010 and to fall back to roughly 25,000 jobs by September. The extent to which Census hiring reduces the measured unemployment rate is more difficult to estimate because that effect depends on the prior labor force status of the temporary Census workers. However, based on the employment estimates, the peak effect on the unemployment rate in May would probably be between ¼ and ½ percentage point.

Q.8. Please explain how term deposits and reverse repo transactions are not the economic equivalent of the Fed issuing debt.

A.8. There are a number of similarities and differences between term deposits, reverse repurchase agreements and agency debt obligations. In principle, each could be used to drain reserves from the financial system in order to reduce the potential for inflation and thereby maintain price stability. Indeed, various central banks use instruments similar to these to help manage interest rates and maintain price stability.

In the United States, Congress has specifically authorized the Federal Reserve to accept deposits from depository institutions. (See 12 USC 342). Congress has also specifically authorized the Federal Open Market Committee to direct Reserve Banks to purchase and sell in the open market obligations of, or obligations guaranteed as to principal and interest by, the United States or its agencies. (See 12 USC 263 and 355). Reverse repurchase agreements represent the sale and purchase of obligations of, or obligations guaranteed as to principal and interest by, the United States or its agencies. Congress has not specifically authorized the Federal Reserve to issue its own agency debt obligations.

Unlike deposits and reverse repurchase agreements, agency obligations are freely transferable. Term deposits may only be accepted from depository institutions and are not transferable. Reverse repurchase agreements also are not transferable and occur only with counterparties that are interested in purchasing qualifying government or agency securities.

Q.9. Given that you have signaled that the Fed will be using the interest on reserves rate as a policy tool in the near future, do you believe that rate should be set by the Federal Open Market Committee rather than the Board of Governors?

A.9. As you know, the Congress has assigned to the Board the responsibility for determining the rate paid on reserves. Although the Federal Open Market Committee (FOMC) by law is responsible for directing open market operations, the Congress has also assigned to the Board the responsibility for determining certain other important terms that are relevant for the conduct of monetary policy—for example, the Board "reviews and determines" the discount rates that are established by the Federal Reserve Banks; the FOMC has no statutory role in setting the discount rate. Similarly, the Board sets reserve requirements subject to the constraints established by the Congress; the FOMC has no statutory role in setting reserve requirements.

For many years, the Board and the FOMC have worked collegially and cooperatively in setting the discount rate, the Federal funds target rate, and other instruments of monetary policy. I am convinced that the Board and the FOMC will continue to work cooperatively in the future in adjusting all of the instruments of monetary policy.